

**NOW WITH  
PACKED  
DISK!**  
FOR YOUR  
• AMIGA  
• ST, &  
• PC  
It's crammed  
so tight...

Issue 152 • 5th October 1991 • £1.50

# COMPUTER EXPRESS

FIRST NEWS • FIRST REVIEWS • BEST BUYS • YOUR WEEKLY GUIDE

**ON YOUR  
TRIPLE  
FORMAT  
EXCLUSIVE**

## AMIGA

• **PROTRACKER**

Produce pro music  
with this brilliant  
multi-track  
sequencer

## ST

• **ANI ST**

The animation  
package that adds  
new life to  
your graphics

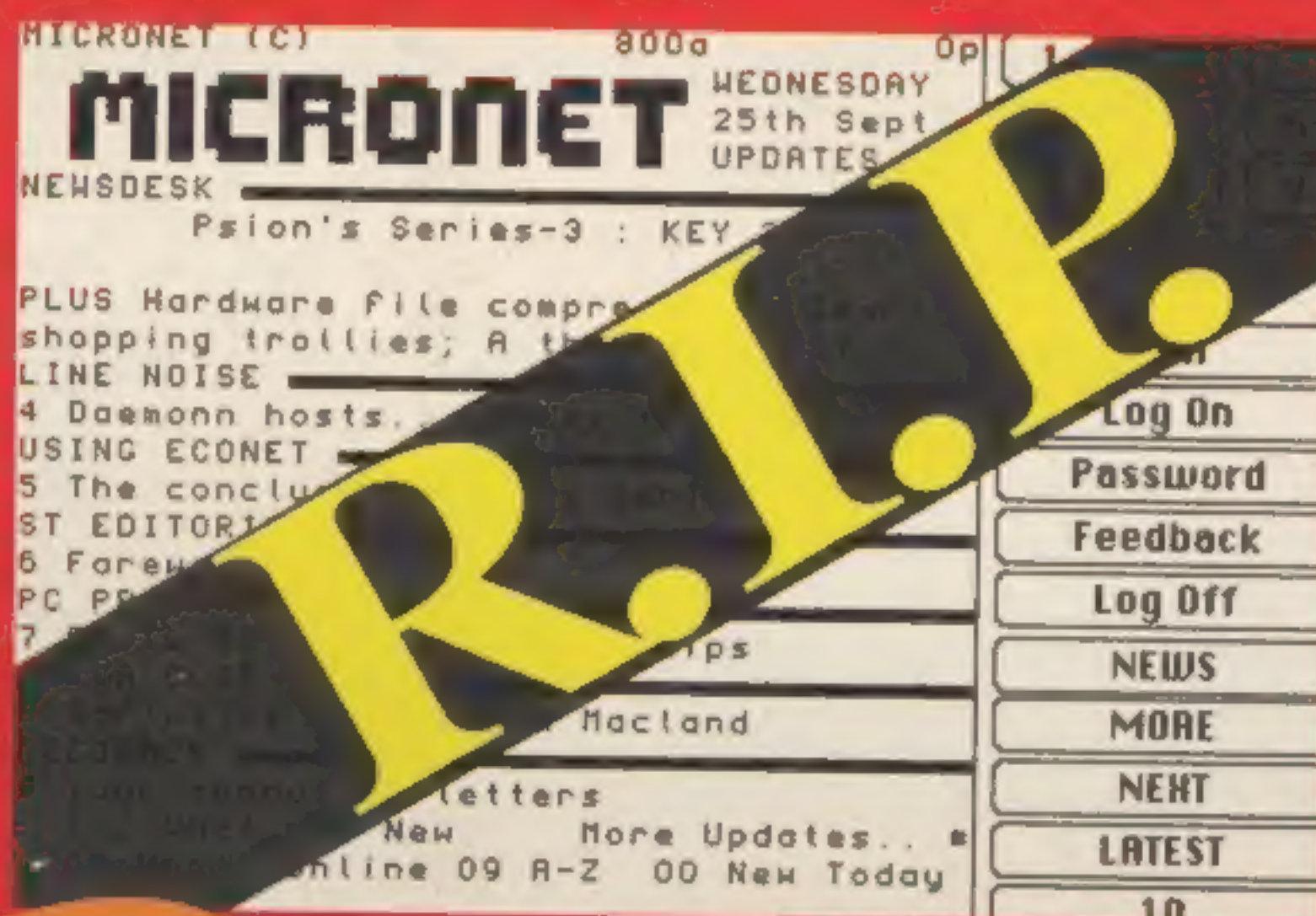
## PC

• **SMARTART**

82 essential  
clip art images  
to jazz up your  
DTP creations

**Inside: all you  
need to know  
to get up and  
running!**

# MICRONET KILLED OFF!



So what should  
you do if you're  
one of its 12,000  
subscribers?

– Telecom suggests  
you sign up with  
its biggest rival!

**plus**



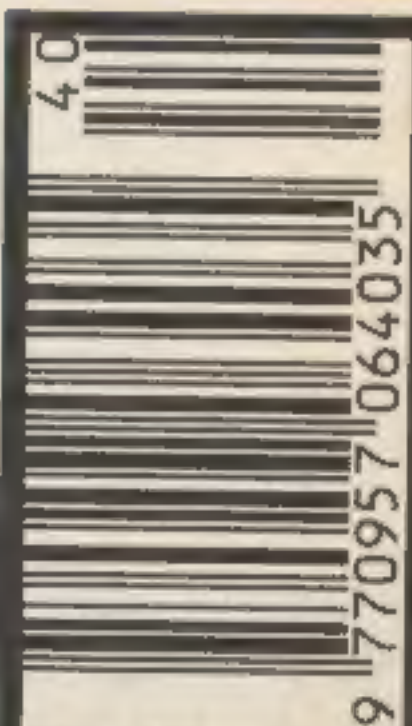
**ACORN'S NEW A5000**  
– A stonking bit of kit,  
shame about the price?

**and**

## VIRTUAL



FREESCAPE LIKE YOU'VE NEVER SEEN IT BEFORE



**future**  
PUBLISHING

Your guarantee of value



A collage of Amiga-related images. From left to right: a game box for 'EXHIBITORS!' featuring a city map and the text 'Well over 150 Amiga companies!'; a character wearing a red cap, sunglasses, and a black jacket; a close-up of Bart Simpson's face; a red banner with the text 'GAME MAKERS!' and 'Quiz the star coders about what they do!'; and a game scene showing a ship and a man.

Amiga Format presents the greatest computer show this year.  
Earl's Court II, November 15-17 1991: be there!

**Who'll be there?** Commodore, New Computer Express, Amiga Format, Amiga Power, Amiga Shopper, all the major games producers, a myriad of serious publishers, loads of bargain-offerers, lots of hardware developers and everyone into the world of Commodore.



## NCE

**COMMODORE**

**You'll think  
Christmas  
has come  
early!**



**BARGAINS!**  
More than you could possibly imagine

# GAMES!



## YOUR MACHINE

### AMIGA

On the Cover Disk we give you *Protracker* to stretch your sound chip to the limits  
A690 CDROM drive and Amiga portables on the horizon?  
Emulate a PC with PD software and LightWave's answer to a keyboard for the CDTV.....49  
We review *Prodota 1.2* and *Invision Plus* .....17

### ST

Get animated with *Ani ST* on the Cover Disk this week  
All about *Thunderhawk*, the latest in chopper sims; catch the Bug and rock the boat with *Virtual Wave* .....50  
*Express* puts *Audio Sculpture*, *Hotwire* and *DDR Toolkit* to the test.....17

### PC

Embellish your DTP with *Smartart Clip Art* on the Cover Disk  
Liven up with *PC Animate Plus*, exclusive pics of the imminent *Strike Commander* plus a host of products for *Lotus 123*.....52  
New products to covet, take notes with the *Taran*, print out with 390 FB, plus the new colour laptop *Prospeed* and *WindowBase*.  
Finally, better be safe than sorry with *PC Guardian Plus*.....8  
*Express*' opinion on the *ICONtroller*.....18

### MACINTOSH

A Mac clone hits the market plus Apple joining an anti-piracy league.....26

### CPC

Golf galore in *Multimixx 1*, Ubi Soft gains *Supremacy* plus tips for *Narc*, *Loopz* and *Hero Quest*..27

### C64

Action throughout the North and South, the disappearance of *Zzap!64* and *Total Eclipse* tip for total enjoyment.....30

### SPECTRUM

The return of the ZX81, we reveal the secrets of the Spectrum and the PD bargain of the week *Trail Racer*.....33

### CONSOLES

New improved *Castlemania* and *Nemesis* on the shelves and R-Type ready for the PC Engine..35

# NEW COMPUTER EXPRESS CONTENTS

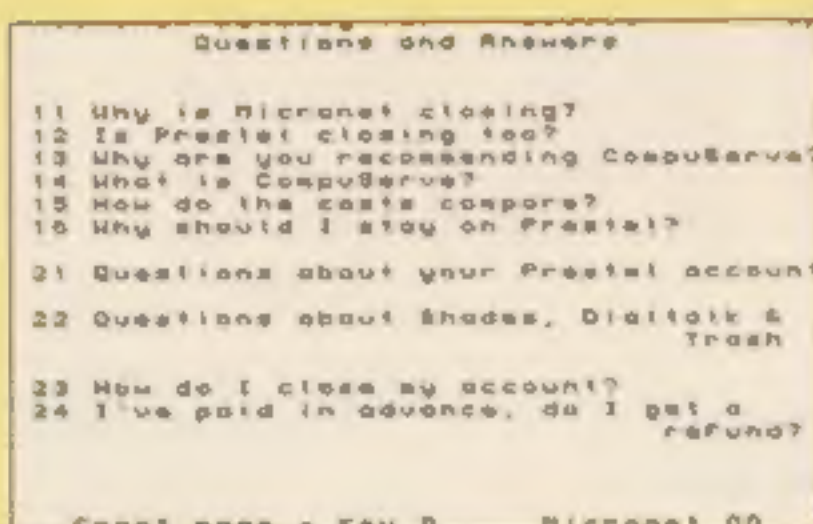
5 October 1991 • Express 152

## COVER STORY

### Pulling the plug to go off-line forever

After nearly a decade, the UK pioneer of electronic publishing, BT's Micronet, is to fold. So what should you do if you're one of its subscribers – page 4 & 5

• The end of an era for modem users as Micronet announces its death



Front page - Kay B Micronet 00

## THIS WEEK

**News:** All the latest updates – page 4-7

### What's New

A 386SX notebook, a 486SX desktop, security software for both and a 24-pin printer – page 8



• The first relational database for Windows is here – yes, PC owners, *WindowBase* has arrived!

## COVER DISK 5

**Express software:** Page 10 is where you should turn to get this week's great disk up and running...



## THE EXPRESS FEATURE

### Pushing the high frontiers of VR

Just how far does the Virtual Reality Toolkit push the limits of future PC graphics? – pages 14 & 15

• Fancy a bit of this action? - then turn to page 14 or have £15k ready



## INSIDE INFORMATION

### The Amiga, ST & PC pages

Check out the fastest news throughput anywhere for all that's happening on your machine – pages 49, 50 & 52

• *Thunderhawk* for the ST: the best 3D graphics yet?

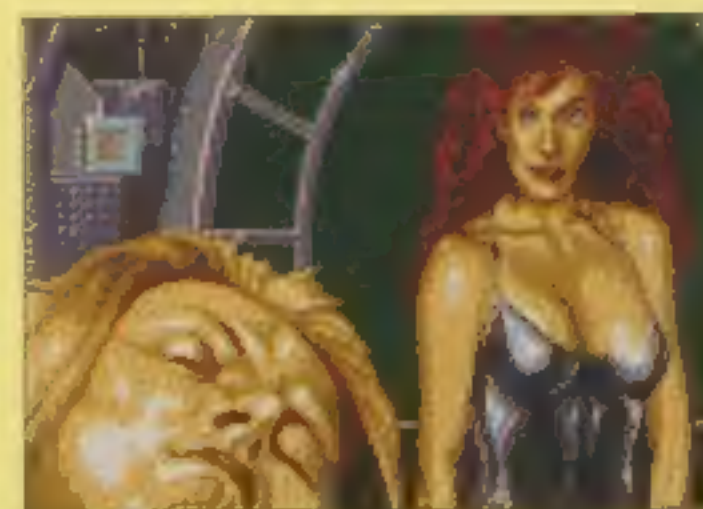


### Public Domain

The essential guide to the best in low-cost software – pages 55, 56 & 57

### Games Week

The latest C64 releases plus reviews of *Rolling Ronny* and *Thunderjaws* for the 16-bits – pages 58 & 59



• Gratuitous shock horror as Stuart Campbell gets into a little trouble with *Thunderjaws*...

## SHOPPING EXPRESS

16-bit reviews	17	CPC	25	Consoles	33
Letters	21	C64	29	TechTips	42
Mac	24	Spectrum	32	On-line	45



## EXPRESS...

A CD ROM disk featuring 60 complete Sherlock Holmes stories and over 250 full colour illustrations is now available from Optech. *Illustrated Sherlock Holmes* costs £29.99 and is compatible with PC CD ROM drives and CDTV. Phone 0252 714340.

## ...SNIPPET

## US accuses Japanese of blocking sales

Japanese semiconductor manufacturers are blocking and delaying sales of components to US companies, placing them at a serious disadvantage in the world market, according to a US Government report.

Details of more than 40 examples of Japanese companies withholding equipment and materials are given in the report, which follows an 18-month investigation by the US General Accounting Office (GAO).

It also claims that Japanese companies have forced US firms to buy unwanted goods in order to obtain the products they wanted, a practice which is illegal under US antitrust laws.

The report does not give details of any of the companies involved, at the request of the American companies which are fearful of reprisals. ■

## EXPRESS...

Japanese company Fujitsu claims to have launched the world's smallest printer for personal computers. The Joy Writer weighs just 1.1kg and has a footprint of just 12x3 inches, yet can still print out A4 pages. If that weren't enough, it even folds in half when you want to carry it.

## ...SNIPPET

## Daily on-line service and computer magazine blames

# MICRONET'S

After nearly a decade of electronic publishing, Micronet, the daily on-line service and computer magazine published on BT's Prestel videotex service, is to close for good on 31 October.

The service's 12,000 subscribers are being offered a special introductory membership to join CompuServe, the giant American system set up in the UK in 1990, and, ironically, one of Micronet's biggest rivals.

The announcement, made on-line last Tuesday evening, will come as a shock to Micronet users, many of whom believed the service was well-supported and had a secure future ahead of it.

### NO NEW CUSTOMERS

BT claims the impending closure follows a strategic decision to concentrate on providing business services on Prestel. Micronet's editorial readily admits, though, that the decision stems from the service's inability to recruit new customers and thereby maintain profits.

"Home users now form a relatively small proportion of our customer base", argued their on-line statement, "and usage by these customers is not at a high enough level to make a major contribution to our costs. We have an obligation to both our customers and shareholders to run an efficient, profitable and cost effective service".

### CUTTING COSTS

Alternatives such as cutting costs by reducing the level of service or significantly raising charges were perceived as being unacceptable to users. BT also considered selling off the service, but no buyers could be found. The future of two other popular areas on Micronet, the on-line multi-user games *Shades* and *Trash*, looks slightly brighter. The service providers behind them could both continue independently, although it's

#### Questions and Answers

- 11 Why is Micronet closing?
- 12 Is Prestel closing too?
- 13 Why are you recommending CompuServe?
- 14 What is CompuServe?
- 15 How do the costs compare?
- 16 Why should I stay on Prestel?
- 21 Questions about your Prestel account
- 22 Questions about Shades, Dialtalk & Trash
- 23 How do I close my account?
- 24 I've paid in advance, do I get a refund?

• Micronet users first heard the news when they logged on last Tuesday evening. The closure had obviously been planned for some time since the CompuServe offer and in-depth questions and answers pages were already prepared

too early to say whether this will be the case.

Commenting on the decision, Paul Needs, Micronet's Executive Editor, told *Express*: "I guess it's a combination of the recession in general and a fall of interest by enthusiasts in using computers for other things apart from games. The magazine, news areas and free software were extremely popular but since 1988, when membership peaked at 21,000, there's been a steady decline."

Asked whether the closure could have been avoided by putting up on-line charges, he added: "We've conducted extensive market research into the sensitivity of pricing - we found our current charges to

## Apple launches new scanner and printers

Apple is launching two new high-performance PostScript laser printers and a new version of the Apple Scanner.

Both products were revealed at the Seybold publishing conference this week. The new Apple OneScanner, is a 256 greyscale, 300 dots per inch (dpi) device - the original Apple Scanner could only scan up to 16 grey levels.

The main innovation, though, is the inclusion of the *Ofoto* scanning software. This uses a system of artificial intelligence to optimise scans for the output device used, and produces excellent results.

According to Clive Girling, Apple's Product Manager, the *Ofoto* software means that, "scanning is a one-click operation. There's no more fiddling about with lots of different parameters - the scanner does it all for you."

Apple's OneScanner is expected to cost just over £1,400, although a firm UK price has not yet been decided.

### DOUBLE SPEED

Along with the scanner, Apple has produced two new high-speed PostScript laser printers, the LaserWriter III and LaserWriter

IIg. Based on a 20MHz 68030 processor, the IIg is claimed to be up to twice as fast as Apple's current top-of-the-range device, the IIINTX. This is partly due to an upgraded processor, and also the fact that the printer contains PostScript Level 2 - a major revision to the original language.

### AT THE TOP END

The LaserWriter IIg is the new top-end device, and is again based on a 68030 processor - this time running at 25MHz. This means that it should run 2.5 times as fast as the IIINTX. It comes

with 5Mb of RAM as standard, and built-in Ethernet for high-speed networking. It also incorporates Apple's new PhotoGrade technology, which produces exceptionally high quality text and graphics - scanned grey scale images are remarkably clear when output, and are a great improvement on the results from normal laser printers.

Again, firm UK pricing is still undecided, but the LaserWriter IIg should retail for around £3,300, while the IIg will be around £4,230. Dial 100 and ask for Freephone Apple.

## Dial a Dizzy password

Budget software house Codemasters is to release a PC version of *Fantasy World Dizzy* into the Public Domain, but if you want to play the whole game then there's a catch.

You can only play the game for five minutes, at which point it freezes and you have to phone an 0898 number to find out the pass code to progress further. Once you have connected you have to tap in a four digit authorisation code which you have been given by the game. You are then told the access code.

The same thing happens 15, 30 and 60 minutes into the game, so a

keen player could run up a sizeable phone bill.

However, Codemasters' MD David Darling, says: "We tried to make it work out so that someone who plays the game extensively won't pay more than if we'd sold it through the normal software channels."

Codemasters decided to try this experiment because although *Fantasy World Dizzy* has sold 600,000 copies in other 8 and 16-bit formats, the company reckons the PC budget market is not sufficiently developed to make a normal release viable.

Codemasters has used 0898



• *Fantasy World Dizzy: five minutes into the Public Domain version and you'll have to pick up the phone*

numbers before to provide 'Tiplines' for its games, and they have proved lucrative. If this experiment is successful, it could release other PC games into the Public Domain. ■

## PC accounting on the cheap

TAS Books is a new PC accountancy package which is being marketed in an unusual way.

Instead of paying for a full-priced version at £640 (single user), £940 (two to four users) or £1,240 (five users plus), manufacturer Megatech is offering a £100 version. This contains the full working software and documentation, but the user cannot insert their name and address until they have sent Megatech the remaining money and licence.

Megatech says the software is ideal for small companies making their first computerised accountancy purchase: "It's very easy to use, and guides the user through the problems of generating their first set of automated accounts," says Theo Van Dort, Megatech's MD. Call 081-874 6511. ■



closure on its inability to attract new customers

# LAST DAYS

## COVER STORY

### Why is Micronet closing?

We have never been able to recruit enough customers to fully cover the costs of providing the service.

With 12,000 registered users Micronet is easily the largest on-line service in the UK specialising in microcomputing. However this number is still not sufficient to maintain a cost effective and profitable service designed principally for home users.

The alternative options of cutting costs by reducing the level of service or significantly raising tariffs were not considered acceptable for our customers.

• The terse announcement explaining the reasons for closure – 12,000 subscribers just isn't enough. How many monthly users would it have needed to stay afloat? 25-30000 according to a BT spokesman. At £10 a month per subscriber, you can work out the annual running costs yourself

be at the optimum level."

Needs remains convinced, that there is still demand for such a service: "There's still plenty of room for developments in on-line publishing, perhaps our best achievement was to show how a good electronic news service could be provided on a day-to-day basis. Unfortunately though, BT can't continue to operate it given its infrastructure costs and the views of its shareholders."

### WHAT IS COMPUSERVE?

CompuServe is the world's largest provider of on-line services for personal computer users with 835,000 members worldwide. Offering a similar range of services to Micronet, it costs approximately £3.60 per hour, depending on what speed you access at, and a further £2.70 per hour if you live outside the London local call area. This compares to the Micronet subscription rate of £30 a quarter including unlimited off peak use. Nevertheless, Micronet believes it is the best alternative for many of its members – presumably those members living in London who spend less than three hours a month on-line. Existing Micronet subscribers not wishing to take up the CompuServe offer are entitled to a refund. Call CompuServe on 0800 298458 or Micronet on 0442 237385

### THE COMPUSERVE OFFER

The proposal being made to subscribers to join CompuServe is regarded by Micronet as an attractive one which 'allows them to have a good look at what CompuServe has to offer at little cost.' Though it adds that if its members are interested in business and financial services they should stay on Prestel whether or not they decide to join CompuServe. What the deal involves is a free introductory membership worth £22.95, free usage credit of about £20, free telephone support, a free monthly magazine and free connect time to use the special Micronet meeting areas in CompuServe's UK computing forum during October.



• Graphmaster: You can work in 3-D and rotate graphs to get an easier view of the results

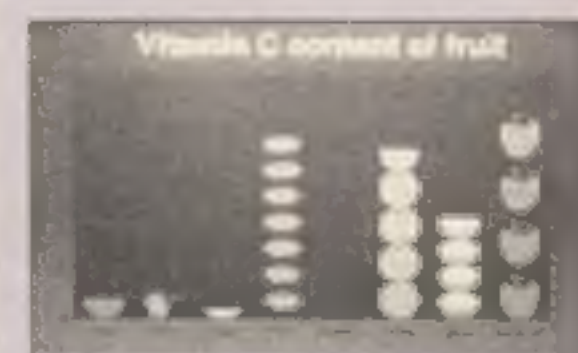
## Apple charting

Graphmaster is powerful chart and graph creation package for the Mac which takes full advantage of System 7.0's capabilities, according to its designer Visual Business System (VBS).

It can create charts in 2D or 3D and provides on-screen rotation, perspective and re-sizing controls. It has a palette of 120 colours and 32 different patterns for creating further shades. It can import data from a wide variety of spreadsheets and databases and the resulting graphs can be fed into desktop publishing packages.

Despite its advanced features, it is very easy to use, claims VBS. All functions are accessed through pop-up drawing tools and pull down menus. If you're still stuck, it provides on-line balloon help.

Graphmaster costs £195. VBS on 0753 821234. ■



• Graphmaster's unique Pictogram editor enables you to create charts using pictures imported from outside the program

## Timely publishing

For budding ST fanzine editors and newsletter writers GST has launched an upgraded version of its popular *TimeWorks Publisher ST* desktop publishing (DTP) package.

Version 2 features a new range of bitmapped fonts in a variety of point sizes and styles, automatic text flow, text wrap around irregular graphics and customisable page sizes. To make the program easier and quicker to use GST has included a simplified installation program and keyboard shortcuts.

The program will run on the Atari ST, STE, Mega ST and TT. Text can be imported from most other leading DTP



• TimeWorks: a low-cost, but fully featured DTP package, ideal for the home user

packages including *WordPerfect*, *WordStar* and *WordWriter*. Files created in the program are interchangeable with the PC version of the program.

*TimeWorks Publisher ST 2.0* will cost £129. Contact Electric Distribution, on 0480 496666. ■

## Classic scrolling adventure games

Three classic Magnetic Scrolls adventure games are now available in one compilation pack from Virgin.

Available for the PC, ST, Archimedes and Amiga and *The Magnetic Scrolls Collection Volume 1* features *Fish*, *Corruption* and *The Guild of Thieves*.

Each game works in a full multi-tasking Windows environment,

can be played with the minimum of typing and feature extensive on-screen help and animation.

The compilation comes with a free colour Fish identifier, a Guild of Thieves map and a Corruption audio tape packed with clues.

Prices range from £29.99 to £34.99 depending on the version and all are out now. ■

## Wordstar for Windows launched at Business Show

Two prominent word processors for Windows were among the products on show at the *Daily Telegraph*-sponsored Business Computing Show.

A spokeswoman for the organisers said that 30,000 visitors attended the show, which opened on 17 September at Earls Court – 9,000 up on last year. Over 300 companies were exhibiting.

The show saw the official launch of *WordStar for Windows*, the latest version of the best-selling word processor package, *WordStar*. The program supports full font rotation, all major graphics formats and printing in 16.7 million colours. Requiring 2Mb of RAM, the package costs £399. Existing users can upgrade for £99.

Asked how it compares with

*WordPerfect for Windows*, a company spokesman retorted: "It's available now!"

*WordPerfect for Windows* did put in an appearance, however. *WordPerfect* held a presentation hosted by none other than Captain James Kirk of the *Starship Enterprise*. Like *WordStar for Windows* it looks more like a fully-fledged DTP package than a humble word processor, and although it currently needs 2Mb of RAM, the company is hoping to get this down to 1Mb. It is due out at the end of October.

A Hampshire-based company, Business Computing Consultants, was exhibiting its 'Office in a Briefcase'. This includes a 386/SX Notebook Computer with 40Mb hard disk, 2Mb RAM, MS-DOS 5.0, VGA, bubble-jet printer, business soft-

ware, a pocket modem and an in-built power supply. All this in a case weighing a mere 16lb and retailing for under £3,000.

The Show also saw the first public viewing of a new Canon colour bubble-jet printer. It is not due until early next year and meanwhile, Canon is working on full driver support for all major software applications. The printer can be used on coated and recycled paper and on A3 lightweight card. It prints in over 16 million colours and supports all fonts – all for only £1,995.

Other presentations of note included the Royal Bank of Scotland's new Home and Office Banking Service and the Data Protection Registrar, whose job has mushroomed since the 1984 Data Protection Act. It was handing out no less than eight



• WordStar for Windows had its official UK launch at the Business show, beating its rival, WordPerfect

guidelines reminding people of their responsibilities and rights under the act.

Contact WordStar International on 081-643 8866, Canon on 081-773 3173 and Business Computing Consultants on 0962 732070. ■



## NEWS

## Chaotic computer

A Japanese scientist claims to have achieved a major step towards true thinking machines with the development of a new concept in neurocomputing based on Chaos Theory.

Professor Inoue of Kagashima University has equipped his neurocomputer with a software-based 'Chaos Oscillator'. Chaos Theory is based on the idea of order within disorder. The Chaos Oscillator continually compares two mathematical formulas to reach a conclusion. This enables it to operate more like the human brain, claims the Professor.

He is planning to incorporate the Chaos Oscillator at chip level at which point it should become crucial in the development of artificial intelligence. ■

## EXPRESS...

Commodore is sponsoring a section of the London Philharmonic Orchestra's International series of concerts to the tune of £120,000. The Series runs from 25 January to 25 February 1992 and will include Bach's St Matthew's Passion and Simpson's 9th Symphony.

...SNIPPET

## Mint Mac conditions

Symantec has launched a System 7.0-compatible version of its data recovery disk management utilities package for the Macintosh.

SUM II version 2.1 features utilities such as Disk Clinic, Shield, Recover, Back-Up, TuneUp, Partition, Encryption and QuickCopy, all designed to help maintain Mac hard disks in peak working order.

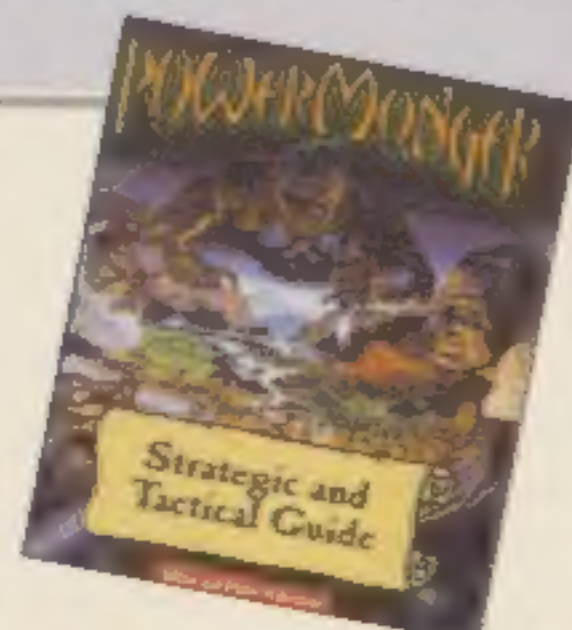
Priced at £99, or £30 for an upgrade for existing SUM II users, SUM II 2.1 is available now. Contact Symantec on 0628 776343. ■

## Novel gaming guide

If you're having problems battling your way through *Powermonger*, then what you need is the *Powermonger Strategic and Tactical Guide* from Electronic Arts.

Priced at £7.50 (just 49p less than it would cost you to buy the

game's predecessor, *Populous*) the book contains 80 sepia-tinted pages. Rather than being full of dull charts and tables, the book is written in the form of a novel, though strangely no author is credited. It will be in the shops by mid October. ■



• Not exactly Dickens, but then David Copperfield wouldn't help you beat marauding enemy armies

Acorn launches the most powerful personal computer ever

## FASTER, CHEAPER, BETTER: THE A5000

Acorn has launched a new 32-bit home computer, the Acorn A5000 which it aims to sell to schools, 'power home-users' and specialist niche markets such as publishing, training and imaging.

At only £1,499 it includes a 40Mb IDE hard disk, 2Mb of RAM (expandable to 4Mb) and a super-VGA multi-scan monitor. It also has a new operating system (OS), RISC OS 3, which offers considerable improvements on the original RISC OS 2.

The A5000 is significantly cheaper than the machine it replaces, the A440/1 (£2,044 with multi-sync monitor) while offering a much greater speed and the new OS.

## IMPROVED IMAGES

The new machine runs at 13 MIPS (Million Instructions Per Second) using the go-faster ARM3 version of its proprietary RISC processor. The ARM3 processor offers a three-fold speed enhancement and the A5000 comes with new hardware to improve the screen image of the previously slightly blurry outline fonts. The overall impression is a machine which is much clearer and faster than the Archimedes. Significantly, that name and logo have been dropped – the new machine is an Acorn A5000 with an Acorn logo.



• The Acorn A5000 contains a new operating system, RISC OS 3, with more than 300 enhancements

The new operating system offers around 300 enhancements. One called Squash enables files to be compressed as they are saved to disk and expanded as they are loaded. The whole process is automatic and transparent to the user.

The OS will also format, read and write from PC and Atari format disks so that data can be transferred more easily to and from the

Archimedes format. High density 2Mb floppies can be used in all formats.

One of the main problems with Acorn machines which do not have a hard disk, is that the operating system has to load various modules such as C-library routines and fonts from a system disk. This means disks keep on having to be swapped. The new OS keeps all these modules and three basic outline fonts in ROM so that disk-swapping should be a thing of the past.

## AT WHAT PRICE?

The new OS ROMs will be available only for the A5000 for the time being, though there will be an upgrade for existing Archimedes users in "the first quarter of 1992". No price has been fixed, but the four 2Megabit ROMs will not be cheap.

The price of the new machine makes the remainder of Acorn's range look more inflated than ever. But since the arrival of the A5000, the top of the range A540, which also has ARM3, has been cut by £500 to £2,495.

Acorn computers will not be reducing the price of the A3000 home computer to compete with the Amiga and Atari ST either. It will stay fixed at £599 plus monitor until after Christmas at the earliest. ■

## DFI puts the PC in the home



• Rather like Amstrad and its new 'Games PC', DFI reckons that its NetPC is going to make the 286 PC more popular as a home computer

DFI reckons that it is putting 286 PC technology within the reach of most home users with the launch of its NetPC range.

For £349 you get a 16MHz 286 processor, 1Mb of RAM and an 80-key keyboard, but no hard disk or monitor. For a 40Mb hard disk version you will have to pay £519, and £90 if you want a mono VGA monitor. A model specially designed for networks is also available.

All models feature a 16-bit expansion slot, two serial ports, one parallel port, a mouse port and a 3.5-inch disk drive. They are all compact and come with their own carrying cases.

"The price of the NetPC will see home usage of PCs increasing dramatically," says Sherman Lai, MD of the Taiwanese company, adding: "The NetPC runs at 16MHz so it provides high performance which meets the requirements of

## Revolutionary motherboard

Compaq is launching a new family of PCs which use a revolutionary form of motherboard construction.

All the computers in the Deskpro/M series have all their major components – the processor, video graphics controller, memory expansion, etc. – placed on separate boards as opposed to all being on one board as with traditional motherboard design.

Compaq calls it Intelligent Modularity and says the advantage of this approach is that each element can be easily upgraded or replaced. It also claims that any user who wants to upgrade their processor will receive credit if they return their old processor.

The computers also feature a custom designed memory controller which will automatically adjust to new processor speeds.

They are available in four processor modules: 25MHz 80386, 16MHz 486SX, 25MHz 486 and 33MHz 486. Prices range from £3,280 to £4,930.

For more information contact Compaq on 081 332 3000. ■

## EXPRESS...

NCR shareholders have given their approval to the company's merger with AT&T. 82.2 per cent voted in favour of the proposal according to the company. NCR shareholders will receive 2,893 shares of AT&T stock for each NCR share they hold.

...SNIPPET



# IS THE MARKET READY FOR A GAMES PC?

This Christmas, Amstrad aims to take a considerable slice out of the Amiga market by tempting shoppers with its new PC5286 Games Pack. Amstrad's marketing manager, Malcolm Miller, tells Dave Roberts why the company is taking this gamble

In a climate where PCs are increasingly being touted by the industry as the games machines of the future, Amstrad has leapt in with a 286-based PC aimed squarely at the home market.

The PC5286, with a 40Mb hard drive and 1Mb of RAM, will come in a bundle with a 14-inch colour monitor, a joystick, a mouse, two external speakers and three games – *Prince of Persia*, *Links Golf* and *F-15 II* – and will cost £899 (plus VAT).

The move is a considerable gamble for the company, especially as its previous foray into this market, with the PC200, was not successful. Amstrad's marketing manager Malcolm Miller reveals why the company is more confident this time around.

**NCE:** People in the trade are talking about a games PC as a new concept but, of course, Amstrad tried it before in 1988 with the PC200. What went wrong?

**Malcolm Miller (MM):** The problems were the timing, the machine's capabilities, the non-availability of software and the lack of readiness in the market.

**NCE:** So what gave you the confidence to try again?

**MM:** I think about nine months ago, we felt there was an opportunity that wasn't being explored. When you think about the number of games available on the PC and the penetration of PCs in the home in America, and then you look at what's happened in the European market where everything seems to have stopped with the Amiga, it suggests that it is time to move on.

**NCE:** It sounds as if you think things have become stagnant, to the detriment of the UK market.

**MM:** Absolutely, the Amiga is

an excellent games machine, but it just doesn't go any further than that.

**NCE:** So do you think that you have launched a new leisure machine?

**MM:** No, it's a PC first, but it plays games as well – better than any PC before. But it is a PC, not a games PC. Young adults will be buying it as a serious machine that plays games, not a games PC that also happens to be a business machine.

**NCE:** So were you not tempted to shy away from calling it the Games Pack and perhaps include some utility software?

**"...the Amiga is just a games chip, it doesn't do anything else..."**

**MM:** I think there's enough utility software around – we don't need to start bundling it. I think we have to describe it to the trade as a games machine to grab their attention, but to the public it will always appear as a PC.

**NCE:** When you were planning the project, did you ever consider using a 386 chip?

**MM:** No, if we used a 386 chip it would make it too expensive.

**NCE:** Did you look at bundling a CD drive?

**MM:** We will do later.

**NCE:** So we'll see a CD PC Games Pack?

**MM:** Yes, I think you will.

**NCE:** Any idea when?

**MM:** Next year sometime.

**NCE:** And it will be a similar idea,

but with a CD drive instead of a hard drive?

**MM:** Maybe with both.

**NCE:** And some bundled CD games?

**MM:** Maybe, yes.

**NCE:** One of the key elements of the current offering is the price. Is £899 the absolute cheapest you can put out this sort of bundle?

**MM:** The only way you can get it any cheaper is if you want to lose money on it.

**NCE:** Some people do believe that you need to get the price closer to the Amiga.

**MM:** The Amiga is priced without a monitor anyway, the Amiga is just a games chip, it doesn't do anything else, it doesn't have a hard drive. It does what it does very well, but it has limitations.

The PC5286 Games Pack has no limitations – it's a very fast PC, a big hard drive, a very good screen. It is not a dressed up Amiga. The Amiga can never do what this can do. This can easily do all what the



• Unlike the entry level Amiga and ST bundles, the PC5286 Games Pack comes complete with a monitor and a joystick



• **Malcolm Miller:** "I think that all businesses and entertainment products will eventually be based around 286 and 386 chips"

Amiga does – and more. I actually think that the Amiga is an expensive luxury, a costly toy. The PC5286 Games Pack is a business machine on which you can play great games.

**NCE:** You obviously see the Amiga as your main target.

**MM:** I do think that we'll take a slice of the Amiga. People will still buy Amigas, but, yes, the Amiga is the main rival, not other PC manufacturers, although they will emulate us – they always do.

**NCE:** What sort of sales figures are you predicting?

**MM:** I can't tell you that.

**NCE:** But you do see it as a mass market product. The machine that you see as its nearest rival, the Amiga, is now looking at sales of a million.

**MM:** We won't do that many this year.

**NCE:** So who is your target audience?

**MM:** I think, perhaps surprisingly, a lot of parents are now buying PCs for the home, rather than buying a new audio system, TV or video. And parents know that kids do not use Amigas in school, they use PCs. We are in the age of great economic reality and every purchase has to be justified. The Amiga just satisfies the games player, it's not right for the 90s.

**NCE:** You sound very confident.

**MM:** Well, we're not going to suddenly wipe out the Amiga. We'll take a percentage. But I do think that this is the right step and a bold step and one which no other PC manufacturer has dared to take – yet. And I do like the idea of our competitors all jumping in. It's good for our business.

**NCE:** But surely, this Christmas kids are going to be nagging their parents for Amigas and they're going to be tempted to spend £399 rather than £899?

**MM:** When kids are driving parents mad and parents are thinking about spending £400 and letting them use one of the TVs, they can quite easily find a good reason to buy a PC, with a monitor, and with enough games to keep the kids happy. The extra use it will get from all the family can justify the expense.

I also think that all business and entertainment products will eventually be based around 286 and 386 chips. There are some things that I know about – and I can't say what they are – that seem to suggest that the whole area of games and entertainment will be dominated by DOS.

And when you think about it, it makes no sense at all to have all these different standards. I think that there will obviously be low-end console products, but generally I think we are entering a process of standardisation. Certainly if you look at other markets, after a bit of a battle, you end up with a standard. ■



## NEW PRODUCTS



•Taran reckons that its 386SX/20 notebook PC offers "all the features of most desk-bound designs"

## Take note of Taran

**PRODUCT:** 386SX Notebook  
**NAME:** The Taran 386SX/20  
**COMPATIBILITY:** PC

Trying to pack as much power into as small a space as possible is a major pre-occupation of all PC manufacturers.

The latest craze is 386SX notebooks which, manufacturers claim, are just like miniature versions of real desktop 386 machines. And Taran is no exception – it claims its new launch, the Taran 386SX/20 is just this. As well as a 20MHz 386SX processor, 40Mb hard disk and VGA graphics, its 100-pin AT bus port means that, 'virtually any expansion device can be used as if this were an ordinary desk-bound 386.' Which is a pretty good boast for a machine that weighs just 2.9kg (around 6.6lbs).

It also includes a 9-pin serial port, a parallel port, a 25-pin connector for a floppy drive and external monitor output. The Taran 386SX/20 can either be run from the mains or an internal battery which lasts up to three hours on one charge.

**Price:** £1,895  
**Availability:** Now  
**Target users:** Corporate market  
**Contact:** Taran Technologies Ltd:  
081-336 1282

**Perceived competition:** Toshiba, and other producers of quality notebooks.

## Printing for all occasions

**PRODUCT:** 24-pin dot matrix printer  
**NAME:** 390-FB  
**COMPATIBILITY:** PC/ST/Amiga

OKI's latest printer, the 390-FB, can handle everything from envelopes and postcards to bank cheques, transparencies and shop receipts, thanks to its adjustable head gap. Luckily, it can handle more mundane things like A4 and A3 paper as well.

This makes it ideal for just about any printing application, from ordinary, everyday word processing to hotel reception areas and airport book-in counters.

The 390-FB has automatic sheet insertion and both forward and reverse feed which means that you can feed in and retrieve paper from the same side. It has a print speed of 75 characters per second (cps) in letter quality mode and 225cps in draft mode. A4 paper can be fed in either landscape or portrait format.

Weighing in at 12kg, it emulates the

# WHAT'S NEW

Are you hooked on hardware or even seduced by software? Whatever it is that takes your fancy, it's right here, right now...

## Managing Windows

**PRODUCT:** Relational database for Windows  
**NAME:** WindowBase  
**COMPATIBILITY:** PC

WindowBase is a relational database management system for Microsoft Windows 3.0 designed to appeal to everyone from the PC novice who just needs to feed in a few figures to the experienced hack who wants to adapt it easily for their own needs.

Its comprehensive range of features includes Form Design for developing print outs that resemble forms currently in use, Table Design for customising, viewing or creating database tables and Report design to incorporate database figures into professional-looking layouts for reports. All are accessed from an easy-to-use graphical user interface (GUI)

Incorporating scroll bars, buttons and customisable pull-down menus.

Dynamic Data Exchange (DDE) enables WindowBase users to exchange data with other leading Windows applications such as Excel and Word for Windows. It also enables the import of graphical images as metafiles, which can then be clipped scaled down or shown full-sized in WindowBase.

WindowBase requires 640K RAM to run (though 2Mb is recommended) and supports all printers supported by Windows 3.0 or higher.

Soon to be released is an application developers kit which includes a complete set of C and C++ developer tools.

**Price:** £395  
**Availability:** Now  
**Target users:** All businesses using PCs



• WindowBase is bursting with features which it ideal for the single user or as part of a network

**Contact:** Software Products International (SPI):  
(0734) 844081  
**Perceived competition:** None, according to SPI, it fills a gap in the market.



• The G90-FB printer from OKI is prepared for anything, that is so long as it involves printing!

Epson LQ and IBM Proprinter XL.  
**Price:** £749  
**Availability:** Now  
**Target users:** Anyone who needs high quality printing  
**Contact:** OKI Systems (UK) Ltd:  
0800 525585

**Perceived competition:** Star XB24-15, Epson LQ 860, Brother 1924 & 2524 and other mid range dot matrix printers.

## Colour power

**PRODUCT:** Colour laptop  
**NAME:** ProSpeed 486SX/C  
**COMPATIBILITY:** PC

A combination of a state-of-the-art 80486SX processor and a specially-devel-

oped Thin Film Transistor (TFT) screen means that the ProSpeed 486SX/C laptop PC can produce colour graphics of near photographic quality, according to manufacturer NEC.

Its screen can support up to 256 colours out of a palette of 4,096 at VGA resolution and has a viewing angle of nearly 180 degrees.

While a laptop, the machine is not a portable as it has to be operated from the mains; there is no internal battery.

The machine features a 20MHz processor and 2Mb of on-board RAM, expandable to 20Mb. As it's aimed at a graphics-orientated market, it is also supplied with a massive 120Mb hard disk for storing all those graphics files.

**Price:** £6,000  
**Availability:** Now  
**Target users:** Corporate market, especially businesses using CAD.  
**Contact:** NEC (UK) Ltd:  
(081) 992 7161

**Perceived competition:** Sharp PC-8500

## Safe and secure

**PRODUCT:** PC security system  
**NAME:** PC Guardian Plus  
**COMPATIBILITY:** PC

PC Guardian Plus is more than just a system which stops unregistered users accessing a PC. It comprises magnetic cards, a card reader unit, a board which has to be installed internally and software.

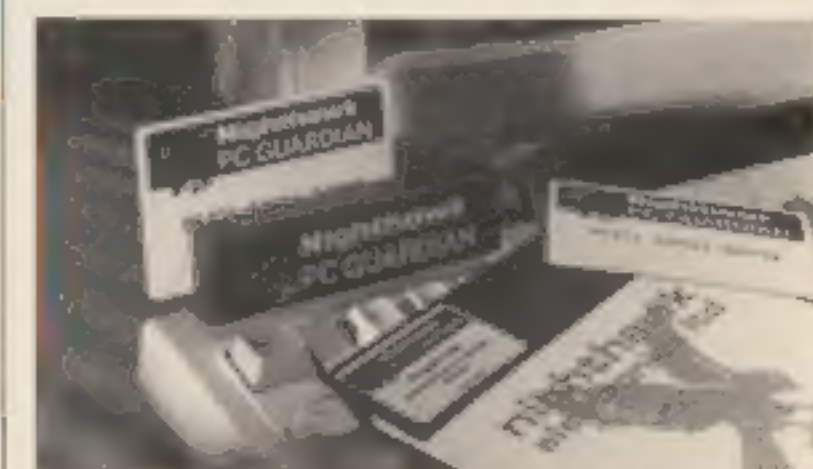
The reader unit connects to the serial socket, but enables other peripherals that require that port to be plugged in as well.

Once the system is installed it can be used to lock off either the whole PC or selected areas to unauthorised users. If you want to get to them, then you have to run your card through the card reader. You also use the software and card reader to program the magnetic cards. Additional security may be added by requiring users to type in a PIN number as well.

The system will automatically clear the screen if the keyboard has not been touched for some time, and users will have to run their cards through the reader to start it up again. It can also be used to automatically open up applications or files. Plus a full log of users, and failed attempts to use the PC is also kept on file.

**Price:** £264  
**Availability:** Now  
**Target users:** All PC users  
**Contact:** Nighthawk Electronics Ltd:  
0799 40881

**Perceived competition:** This is the first of its kind available directly for the consumer.



• Keep your files hidden from prying eyes with the help of PC Guardian Plus



# CITIZEN

## ALWAYS A GOOD IDEA

Silica presents some great offers on the award winning range of high quality matrix printers from Citizen. Each Citizen printer is built in the UK to exacting standards, ensuring superb reliability and output. Our confidence in Citizen's quality is such that we are pleased to include a 2 year guarantee with every printer. Plus, if you buy a Citizen printer from us, we will give you the Silica Systems Printer Starter Kit (worth £29.38), FREE OF CHARGE!

**FREE DELIVERY**

Next Day - Anywhere in the UK mainland

**FREE STARTER KIT**

Worth £29.38 - With every Citizen printer from Silica.

**2 YEAR WARRANTY**

Silica offer a 2 year warranty (including the printer head) with every Citizen printer from Silica.

**WINDOWS 3.0**

Free Windows 3.0 driver.

Included with the Silica Starter Kit.

**FREE COLOUR KITS**

With every Swift 9, 24 or 24x printer.

**FREE HELPLINE**

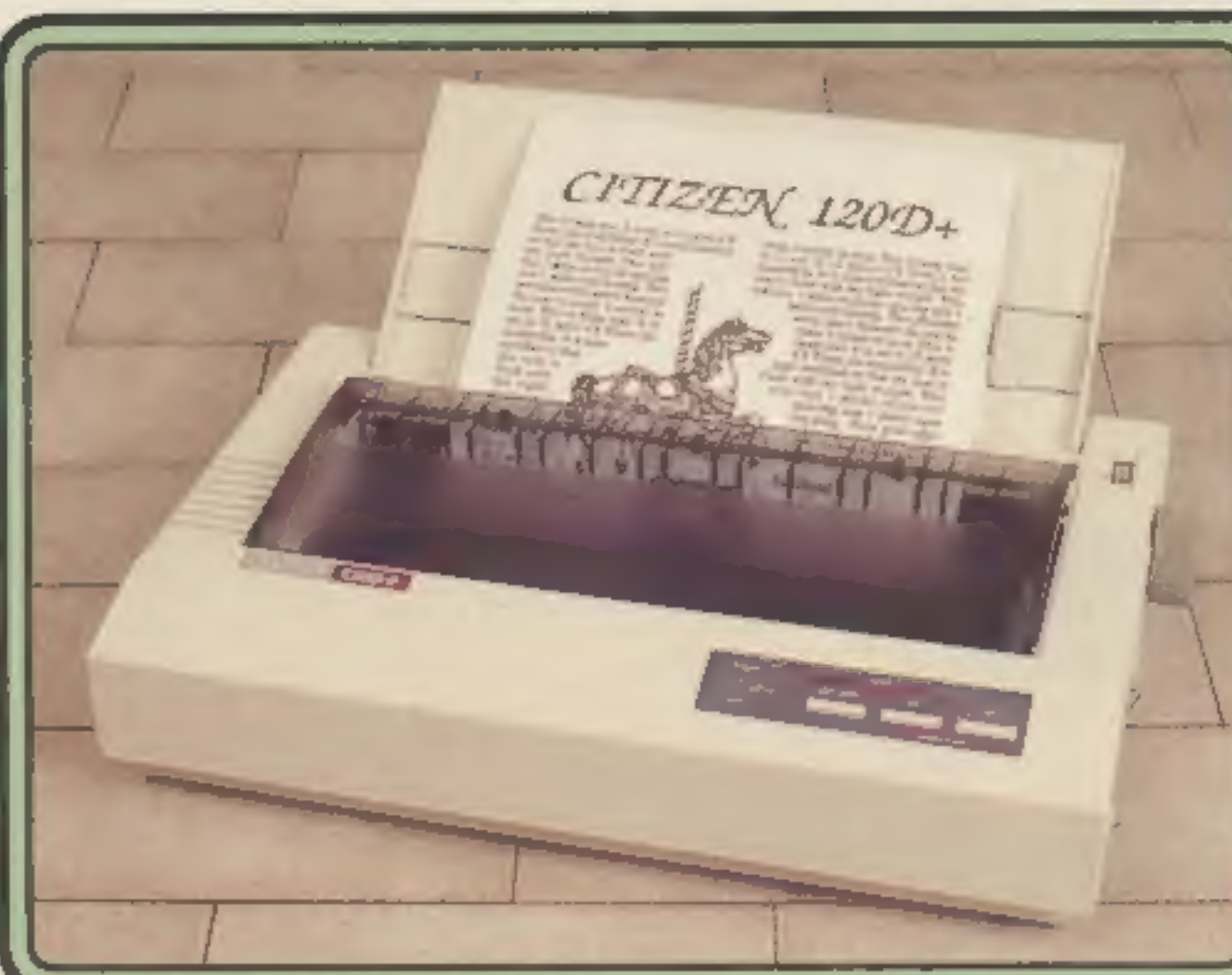
Technical support helpline open during office hours.

**MADE IN THE UK**

Citizen printers are manufactured to high standards.

# DOT MATRIX & NOTEBOOK

# PRINTERS



## 9 PIN PRINTER

144 CPS

80 COLUMN

- Citizen 120D+ - 9 pin - 80 column
- 144cps Draft, 30cps NLQ
- 4K Printer Buffer + 2 Fonts
- Parallel or Serial Interface
- Graphics Resolution: 240x240dpi
- Epson and IBM Emulation
- Pull tractor & bottom feed
- FREE Silica Printer Starter Kit

RRP: £199  
STARTER KIT £25  
TOTAL RRP: £224  
SAVING: £95  
SILICA PRICE: £129

The 120D is supplied with a parallel interface. If you require a serial interface instead, please state when placing your order.

# £129

+VAT=£151.58 ref: PRI 2120

## NOTEBOOK PRINTER



WORLD'S SMALLEST & LIGHTEST A4 NOTEBOOK PRINTER

64 CPS 80 COLUMN

- Citizen PN48 Notebook Printer
- Non-impact Printing on Plain Paper
- LASER QUALITY - 64cps
- 4K Printer Buffer + 2 Fonts
- Rear and Bottom Paper Loading
- Parallel Interface
- Graphics Resolution: 360x360dpi
- Epson, IBM, NEC P6 & Citizen Emulations
- Powered From Mains, Battery or Car Adaptor
- FREE Silica Printer Starter Kit

RRP: £325  
STARTER KIT £25  
TOTAL RRP: £350  
SAVING: £101  
SILICA PRICE: £249

# £249

+VAT=£292.58 ref: PRI 2100

## 9 PIN PRINTERS



COLOUR

192 CPS 80 COLUMN

- Citizen Swift 9 - 9 pin - 80 column
- 192cps Draft, 48cps NLQ
- 8K Printer Buffer + 3 Fonts
- Parallel Interface
- Graphics Resolution: 240x240dpi
- Epson and IBM Emulation
- FREE Colour Kit
- FREE Silica Printer Starter Kit

RRP: £230  
COLOUR KIT £30  
STARTER KIT £25  
TOTAL RRP: £285  
SAVING: £113  
SILICA PRICE: £189

# £189

+VAT=£222.08 ref: PRI 2209



COLOUR

192 CPS 136 COLUMN

- Citizen Swift 9x - 9 pin - 136 column
- 192cps Draft, 48cps NLQ
- 8K Printer Buffer + 3 Fonts
- Parallel Interface
- Graphics Resolution: 240x240dpi
- Epson and IBM Emulation
- A3 landscape printing - FREE Colour Kit
- FREE Silica Printer Starter Kit

RRP: £329  
COLOUR KIT £41  
STARTER KIT £25  
TOTAL RRP: £395  
SAVING: £145  
SILICA PRICE: £249

# £249

+VAT=£292.58 ref: PRI 2308

## 24 PIN PRINTER



GOLD AWARD  
Best Budget  
Printer 1990  
Micro Decision

24-PIN PRINTER ONLY £169!

144 CPS 80 COLUMN

- Citizen 124D - 24 pin - 80 column
- 144cps Draft, 48cps LQ
- 8K Printer Buffer + 2 Fonts
- Parallel Interface
- Graphics Resolution: 360x360dpi
- Epson and IBM Emulation
- FREE Semi Automatic Cut Sheet Feeder
- FREE Silica Printer Starter Kit

RRP: £249  
CUT SHEET FEEDER £40  
STARTER KIT £25  
TOTAL RRP: £314  
SAVING: £145  
SILICA PRICE: £169

# £169

+VAT=£198.58 ref: PRI 2474

## PRINTER ACCESSORIES

**SHEET FEEDERS**

PRA1200 1200 £71.30  
PRA1215 1240/Swift 9/24 £88.70  
PRA1228 1240/Swift 9/24 £42.00

**SERIAL INTERFACES**

PRA1189 1200+ £56.45  
PRA1209 Swift 9/1240 £32.25  
PRA1709 Swift 24 £26.38

**32K MEMORY EXPN**

PRA1753 1240/Swift 24 £13.10

**PRINTER STAND**

PRA1242 1240/Swift 9/24 £24.03  
PRA1274 Swift 9/24x £30.66

**ORIGINAL RIBBONS**

RIB 3520 1280/Swift 9 Black £3.41  
RIB 3949 Swift 9x Black £7.15  
RIB 3924 1240/Swift 24 Black £4.70  
RIB 3936 Swift 9/24 Colour £15.63  
RIB 3248 PM48 Single Strike £4.11  
RIB 3348 PM48 Multi Strike £4.11

**COLOUR KITS**

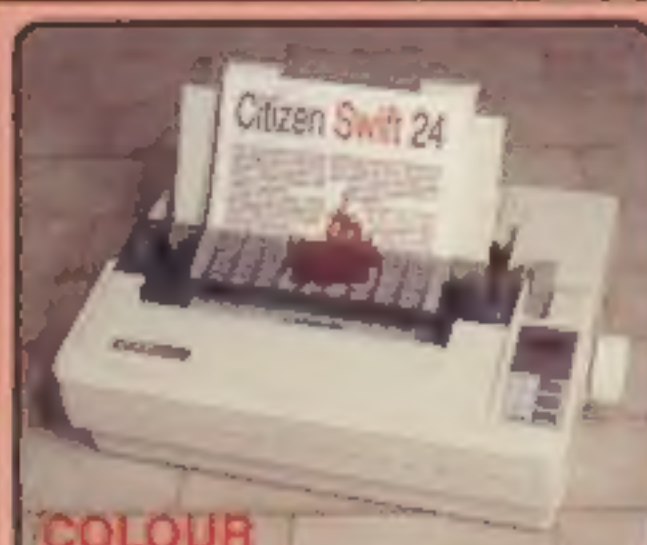
PRA1236 Swift 9/24 £39.65  
PRA1240 Swift 9/24x £44.18

**PN48 ACCESSORIES**

PRA1148 PM48 Battery £51.70  
PRA1155 PM48 Cable Ext. £ TBC  
PRA1162 PM48 Car Adaptor £ TBC

All prices include VAT and Free delivery.

## 24 PIN PRINTERS



COLOUR

192 CPS 80 COLUMN

- Citizen Swift 24 - 24 pin - 80 column
- 192cps Draft, 64cps LQ
- 8K Printer Buffer + 4 Fonts
- Parallel Interface
- Graphics Resolution: 360x360dpi
- Epson and IBM Emulation
- FREE Colour Kit
- FREE Silica Printer Starter Kit

RRP: £385  
COLOUR KIT £30  
STARTER KIT £25  
TOTAL RRP: £440  
SAVING: £189  
SILICA PRICE: £259

# £259

+VAT=£304.33 ref: PRI 2524



COLOUR

192 CPS 136 COLUMN

- Citizen Swift 24x - 24 pin - 136 column
- 192cps Draft, 64cps LQ
- 8K Printer Buffer + 4 Fonts
- Parallel Interface
- Graphics Resolution: 360x360dpi
- Epson, IBM and NEC P6 Emulation
- A3 landscape printing - FREE Colour Kit
- FREE Silica Printer Starter Kit

RRP: £480  
COLOUR KIT £41  
STARTER KIT £25  
TOTAL RRP: £546  
SAVING: £206  
SILICA PRICE: £349

# £349

+VAT=£410.08 ref: PRI 2574

## PRINTER STARTER KIT

**FREE!**

Every Citizen printer from Silica comes with the Printer Starter Kit, everything you need to get up and running with your new printer, FREE OF CHARGE!

- 3 1/2" Disk - Amiga & ST Drivers
- 3 1/2" Disk - Drivers for Windows 3
- 2 Metro Parallel Printer Cable
- 200 Sheets of Continuous Paper
- 100 Continuous Address Labels
- 5 Continuous Envelopes

Printer owners may order the Silica Printer Starter Kit (ref: KIT 5001) for only £24.38 net WT - £5 off RRP!



WORTH: £25 +VAT = £29.38

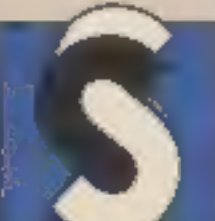
## SILICA SYSTEMS OFFER YOU

- **FREE OVERNIGHT DELIVERY:** On all hardware orders shipped in the UK mainland.
- **TECHNICAL SUPPORT HELPLINE:** Team of technical experts at your service.
- **PRICE MATCH:** We normally match competitors on a "Same product - Same price" basis.
- **ESTABLISHED 12 YEARS:** Proven track record in professional computer sales.
- **BUSINESS + EDUCATION + GOVERNMENT:** Volume discounts available for large orders.
- **SHOWROOMS:** Demonstration and training facilities at our London & Sidcup branches.
- **THE FULL STOCK RANGE:** All of your requirements from one supplier.
- **FREE CATALOGUES:** Will be mailed to you with offers and software/peripheral details.
- **PAYMENT:** By cash, cheque and all major credit cards.

Before you decide when to buy your new printer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals or software, or help and advice. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for over 12 years and, with our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest Free literature and begin to experience the "Silica Systems Service".

MAIL ORDER HOTLINE  
**081-309 1111**

**SILICA SYSTEMS**



**MAIL ORDER:** 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-309 1111  
Order Lines Open: Mon-Sat 9.00am-6.00pm No Late Night Opening Fax No: 081-308 0808

**LONDON SHOP:** 52 Tottenham Court Road, London, W1P 0BA Tel: 071-580 4000  
Opening Hours: Mon-Sat 9.30am-6.00pm No Late Night Opening Fax No: 071-323 4737

**LONDON SHOP:** Selfridges (1st Floor), Oxford Street, London, W1A 1AB Tel: 071-629 1234  
Opening Hours: Mon-Sat 9.30am-6.00pm Late Night: Thursday until 8pm Extension: 3914

**SIDCUP SHOP:** 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-302 8811  
Opening Hours: Mon-Sat 9.00am-5.30pm Late Night: Friday until 7pm Fax No: 081-309 0017

To: Silica Systems, Dept NCE-1091-55, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

**PLEASE SEND CITIZEN PRINTER INFORMATION**

Mr/Mrs/Ms: ..... Initials: ..... Surname: .....

Address: .....

Postcode: .....

Tel (Home): ..... Tel (Work): .....

Company Name (if applicable): .....

Which computer(s), if any, do you own? ..... 55B

EOOE - Advertised prices and specifications may change - Please return the coupon for the latest information.

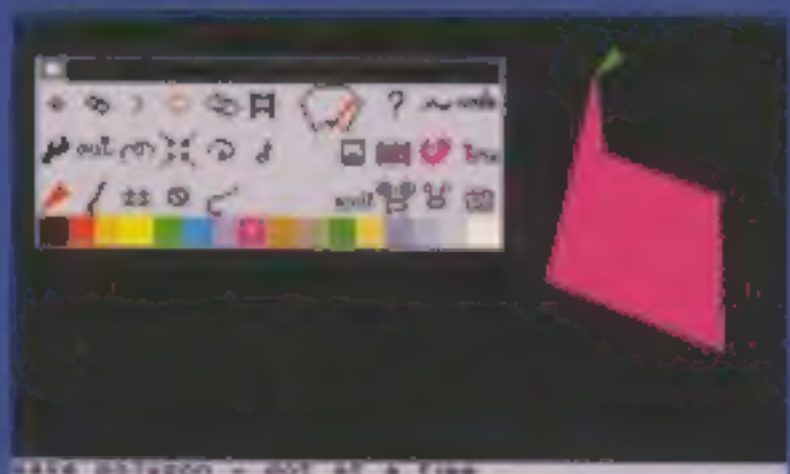


## COVER DISK 5

## COVER DISK 5



## DISK CONTENTS

AMIGA  
ProtrackerST  
Ani STPC  
SmartArt Clip Art

## Excite your aural and visual senses with this week's Express Cover Disk!

After spending the last two week's airborne with *Air Warrior*, this week the Express Cover Disk goes for something a bit more productive, but nevertheless almost as exciting.

Sight and sound are the names of the game, and we attempt to stretch your machines to the limits of their capabilities. We exercise the Amiga aurally with *Protracker*, animate your Atari ST with *Ani ST*, and brighten up your PC's desktop publishing (DTP) documents with a large selection of *SmartArt* clip art images.

## TRI-FORMAT TECHNOLOGY

We are able to provide software for the three most popular 16-bit computers – the Amiga, ST and PC – on a single 3.5-inch floppy disk due to the special disk format developed for Express by Rob Northern Computing. Not only can we fit these programs on one disk, but we can also vary the amount of disk space we dedicate to each machine.

## DECISIONS, DECISIONS

How do we decide what to put on the disk? Well, that's what we'd like you to try and help us with. While we do get a wide range of software that we can put on the disk, the type of programs we include – whether they're applications, utilities or games – change from week to week.

If you've got an idea of a type of program you'd like to see on the disk, or if you've got any comments or criticisms to make, even about the general type of software on the disk, then write in and tell us!

Send this information to: Cover Disk Feedback, *New Computer Express*, 30 Monmouth Street, Bath BA1 2BW.

## COVER DISK PROBLEMS

During the period that the Express Cover Disk has been available, we've received a number of returned disks back at the Express office.

Some readers have got confused between returning the disks and what they do if they have a problem with the programs on them.

Firstly, if you have a problem with the disk – in that it's broken, your machine has never been able to load it,

or something else is seriously wrong with it – then send it along with an SAE to: *New Computer Express* Cover Disk Returns, Disk 5, Disk Copy Labs, Unit A, Westmarch, London Road, Daventry, Northants NN11 4SA. A replacement disk will be headed your way soon after – just don't forget the SAE!

Secondly, if you have a problem with the software on the disk, then send a letter explaining what happened into us here at: Cover Disk Problems, *New Computer Express*, 30 Monmouth Street, Bath BA1 2BW. And if you've found a problem and have managed to solve it, then send us a solution if you can, just so we can help someone who's had the same problem.

Telephone enquiries regarding the Express Cover Disk should only be made on Fridays between 9.30 am and 1.30 pm. Because *New Computer Express* is a weekly magazine, there is simply no time to answer your calls outside those hours.

## CONTRIBUTIONS

We're always on the lookout for software to go on the Cover Disk. If you've written a program that you think other Express readers may find useful, interesting or just plain fun then send it in!

Fill in the form that's on the bottom of this page, and send us a copy of the program along with as much information about it as possible. And if we use the program, we'll pay for it: up to a whopping £1,000!

## EXPRESS DISCLAIMER

While we strive to ensure that the Cover Disk is free of all viruses and that the programs on it work properly, *New Computer Express* does in no way accept any liability for any problems that may arise from using the disk or the programs on it.

## INTERESTED?

If you are a software house or run a Public Domain/shareware company and are interested in contributing software to be used on the Express Cover Disk, we'd like to hear from you now! Call Tim Howell, Cover Disk editor, on 0225 442244.

## EARN UP TO £1,000

We need your programs for the Express Cover Disk, whether they are utilities, games, applications or demos for any of the three supported formats.

If you think you've written something that other Express readers would find useful, interesting or just plain fun, then send it in! We're on the look out for any software for the Amiga, ST and PC, and if we use it, we'll pay for it – up to a maximum of £1,000!

As you all know, Express is a weekly magazine which means it comes out at least four times more often than the monthlies. So now you've got that many more chances to contribute your creation, earn some money and see your name in print.

## GUIDELINES TO FOLLOW

**1** Please document the software as much as possible. We'll be getting heaps of programs and to have to work out how to use them all will take up what little time we have to put together a great disk.

**2** Check for big mistakes in the program such as (any) bugs, errors, or file corruptions. If you find any, fix them and send the program in some other time. Just think: if it works, then we might even use it.

**3** Check for little mistakes in the program such as misspelled words. This may take a little extra time, but it will look that much more professional.

**4** Test everything before you send it in. If it's a duff disk then we won't be able to do anything with it, will we?

**5** In the case of PC software, try to use CGA as well as EGA and VGA graphics, and even MDA (monochrome) if possible. Also, if the program uses a mouse, try to make it so that it is an option and not an absolute necessity. Basically, try to accommodate as many PC users as possible.

NB: Unfortunately we won't be able to return any disks sent in to us. Not even if you include an SAE. The monthly magazines can do that, but because we put out a disk every week there is simply no time to arrange anything along those lines.

Once you've done all that and filled in the form on page 11, send all your contributions to: Cover Disk Contributions, *New Computer Express*, 30 Monmouth Street, Bath BA1 2BW.



# AMIGA

## PROTRACKER

One of the most stunning features of most Amiga games and demos is their amazing music. While this music does sound as if it would be difficult to do – and without taking any credit away from the talented musicians out there, it is – *Protracker* is a program that will enable you, with a bit of effort, to stretch your Amiga's sound chip to the limits.

This program is a variation of the popular *Soundtracker* and *Noisetracker* music tools that are commonly used for creating Amiga music.

### LOADING PROTRACKER

Before you do anything with it though, make a back-up copy of the disk using the instructions in Amiga Back-up Copy box found elsewhere on this page.

Once you have made the back-up, loading *Protracker* is no problem. After you insert your disk, and the welcome message pops up, *Protracker* will automatically load. Before *Protracker* comes up on-screen, you will be prompted to Insert ST-00: into your drive – don't worry, just click on cancel. The reason *Protracker* does this is that many of the *Soundtracker*-type programs use a disk labelled ST-00: as the main music/module disk. *Protracker* doesn't need this as it can load from and save to any Amiga disk.

## USING PROTRACKER

Full documentation for using *Protracker* is provided within the program itself – press HELP to display its functions.

The best way of seeing what *Protracker* can do is to load up a music module for it to play. There is a module on the disk, for you to see, hear and play around with.

To load the module click on the DISK OP. function, found in the top part of the screen, and then on LOAD MODULE. It will ask you again to insert ST-00: Click on cancel again, and move the cursor to where it says MODULENAME. Change ST-00:MODULES so that it reads DF0:MODULES. You will see a filename appear in the main window, called BASS. Click on the name to load it.

Once the module has loaded, you will be returned to the main screen. If you want to hear the module, click on PLAY and to stop it playing, click on STOP.

At the bottom of the screen you can see four columns of numbers – these represent the four Amiga sound channels.

As the module plays, these columns of numbers scroll upwards. These are the musical notes of the samples the module uses. *Protracker*, and indeed other similar music programs, works by stringing together

## COVER DISK 5

### AMIGA INFORMATION

**PROGRAM:** Protracker

**DESCRIPTION:** Music utility

**DIRECTORY:** -

**FILE (S):** Protracker, PROP, PT-CIAPlay.s, PT-PLAY.s, PT.config-00, PT.Effects.txt, PT.FileFormat.txt, PT.help, PT.ReadMe!, PT.TempoCalc.txt, PT11b-CIAPlay.s.pp, PT11b-Play.s

lots of smaller samples, making them into a longer tune.

To change between the different samples the module uses, click on the arrows next to the SAMPLE option at the left of the screen to increase and decrease the number of the sample you want to play.

The names of the samples are listed by SAMPLENAME near the middle of the screen. Select a sample and then press a key on the keyboard to hear it. The QWERTY keyboard effectively acts as a piano keyboard, with the pitch of the sample increasing as you move further to the right of the keyboard.

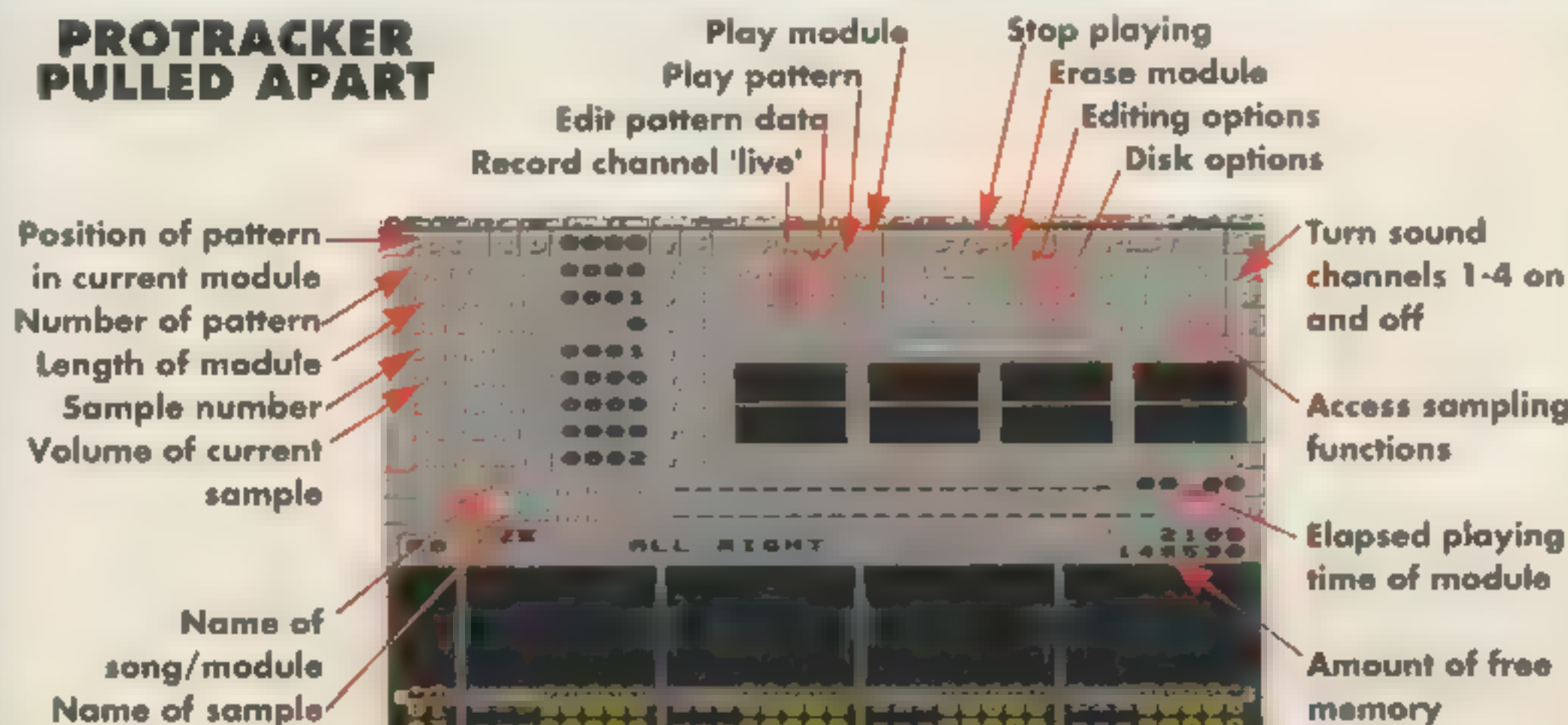
For more details, look at Making Music, below, or *Protracker*'s built-in documentation.

### MAKING MUSIC

If you want to have a go at creating a piece of music, using the samples the supplied module uses, follow these steps:

1. Load the module (if you haven't already).
2. Select a sample that you want to use – use the arrow icons by the SAMPLE option to change them. See SAMPLENAME a bit further down the screen to see the name of the sample.
3. Click on the EDIT icon – the mouse pointer will change colour.
4. Use the cursor keys to move to the channel you want to edit. To edit the channel, move the cursor to each position you want a note to be played. Or, alternatively, click on RECORD and play the notes 'live'. You can edit them later if need be.
5. To change sound channels, move the cursor to the next channel you want to edit and repeat 5.
6. During editing you can click on PATTERN to hear the pattern.
7. To change patterns, click on the arrows next to the PATTERN option, this time, at the side of the screen. Once you have a series of patterns you want to make a song out of, go to the POSITION prompt and set POSITION 0, for example, to the number of the pattern that your piece starts. Before long you'll have written your own masterpiece!

### PROTRACKER PULLED APART



### AMIGA BACK-UP COPY

- 1 Start your Amiga with Workbench disk
- 2 Take a blank disk and initialise it (instructions in your user manual)
- 3 Now enter the CLI, by double clicking on the CLI icon that is in your System drawer on a standard Workbench disk
- 4 Then enter the following CLI commands (a setup your working environment (remember to press <RETURN> after each. NB The ^ character is found at the top right of the Amiga's keyboard, next to the Backspace key. Press SHIFT / to get the character):  
MAKEDIR RAM:C  
COPY C:COPYIDIRDELETE RAM:C  
COPY C:MAKEDIRINSTALL RAM:C  
PATH RAM:C ADD  
PROTECT RAM:C RWE  
PROTECT RAM:C/COPY RWE  
PROTECT RAM:C/DIR RWE  
PROTECT RAM:C/DELETE RWE  
PROTECT RAM:C/MAKEDIR RWE  
PROTECT RAM:C/INSTALL RWE

5 Once you have entered the commands and the drive light has gone out, take out your Workbench disk and put your New Computer Express Cover Disk in the internal drive (DF0:). To start copying, enter the following CLI command:  
COPY DF0:?? RAM

6 During copying, the machine will display a list of the files being copied. Once copying has finished, remove your Cover Disk and insert your newly formatted disk into the internal drive and enter the following commands:  
COPY RAM:?? DF0:  
DELETE RAM:??

7 That's the whole lot of the Cover Disk copied. The next step is a bit more tricky. Firstly, remove your copy disk and insert the Cover Disk into the internal drive. Enter the following:  
DIR DF0: OPT D

The Amiga should then display a list of all the directories on your Cover Disk which will look something like the following:

```
(dir)
devs(dir)
```

```
(dir)
lib(dir)
lib2(dir)
Write down this list onto a piece of paper (the (dir) extension is not needed).
```

8 With your Cover Disk in the internal drive, each directory that was listed has to be copied individually. So, as an example, to copy the directory you would enter:

```
COPY DF0:C ALL RAM
Now repeat stage 8 for all the directories on the Cover Disk master. (So, in the CLI commands above, replace each instance of C with the name of the directory to be copied). Once all the directories have been copied you will have a successful copy of the Cover Disk.
```

9 Now, remove the Cover Disk and insert your copy disk and type:  
MAKEDIR DF0:C  
COPY RAM: ALL DF0:C  
DELETE RAM:?? ALL  
10 The final step in backing up the Cover Disk is to install and make it bootable:  
INSTALL DF0:



# COVER DISK 5

## ANI ST

Graphics and art programs may be useful, but to push your computer even further an animation package is really the next step. This week we feature *Ani ST*, a highly regarded animation package for the ST.

*Ani ST* was once a commercial package called *Aegis Animator* which was released by the American company Aegis Developments. The rights of the original program have recently fallen back to the original programmer, Jim Kent, who has released a slightly improved version of the program as shareware. A smile is the suggested contribution.

## LOADING ANI ST

Before you do anything with the Cover Disk make a copy of it - see the ST Back-up Copy box elsewhere on this page for instructions on how to do this.

Set your ST to low resolution (if it not already in that mode) by going to the Set Preferences command in the Options menu. Then, once you have done that, and using your back-up copy, open the ST folder by clicking

## FILE TYPES

Included on the Cover Disk are a variety of demo files for you to see how *Ani ST* works. What follows here is an explanation of the types of files used by the program, distinguished by their different file suffixes: SCR - These files are complete animation scripts which tell *Ani ST* what files to use for animations. NEO - This is the graphic screen used as a background to the animations. Most popular graphics programs, such as *Neochrome*, can output files in this format.

PI1 - This is a low resolution picture in *Degas* format, another popular graphic type for the ST.

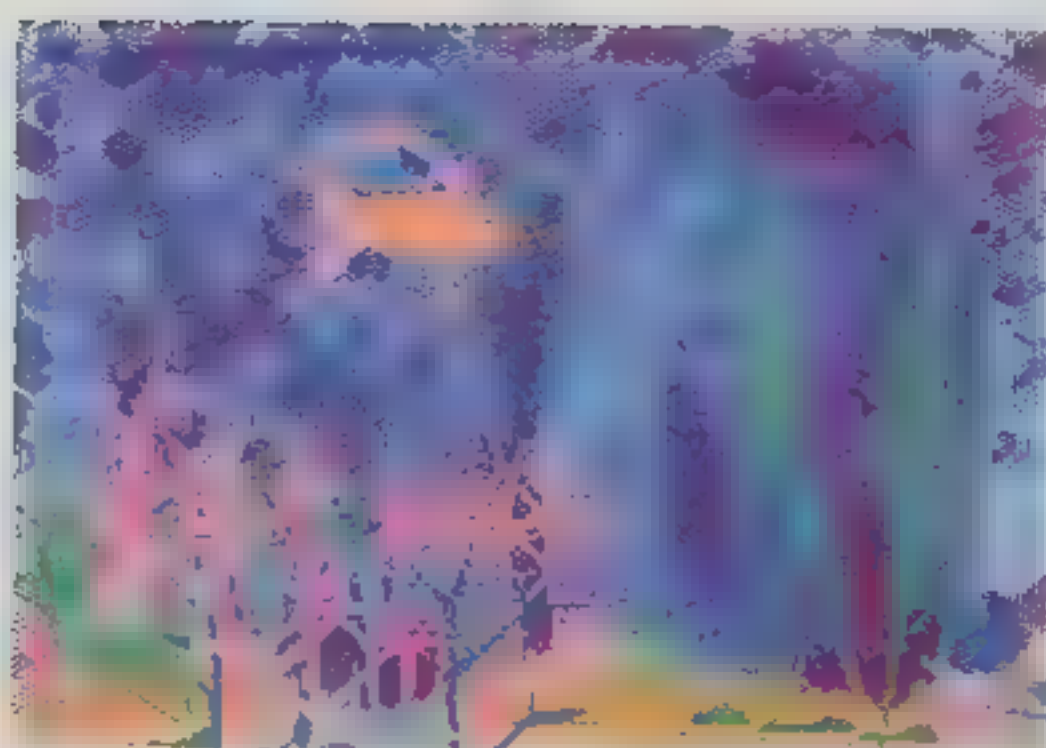
CEL - A rectangular piece of a picture which can be loaded and moved but not metamorphically transformed.

MSK - A rectangular piece of a picture reduced to a single colour. It is slightly faster than a CEL and uses less memory.

POL - A single polygon.

COL - A colour palette.

STR - An animation script used as a single object when loaded. These enable you to build up animations in pieces and then merge them together.



This is a screen from one of *Ani ST*'s sample animations on the Cover Disk, *LITTLESEA.SCR*. All the fish on the screen are animated, as are some of the underwater plants.

on it, then click on the ANIST.PRQ icon to load and run the program.

## USING ANI ST

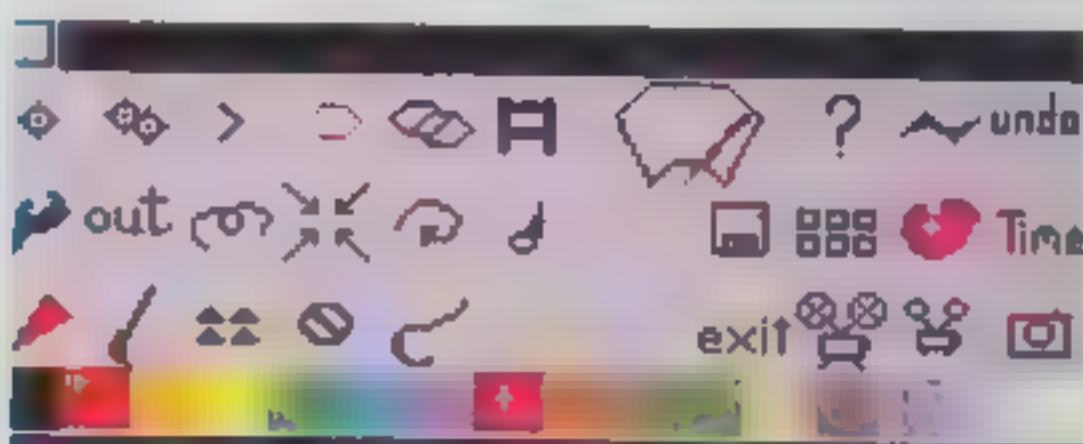
There is full documentation for *Ani ST* included on the Cover Disk - see the file ANIST.DOC. To view this file, set your machine to medium resolution and then click on the file and then SHOW to display it on-screen.

*Ani ST* functions as, in animation terms, a 'tweener', using metamorphic polygon animation. What this means is that the program lets you draw an initial shape and the shape that you want the animation to end up as, and the computer will generate the frames in between the two different shapes.

When *Ani ST* first loads, a black screen appears with a small icon-driven menu positioned in the top left corner of the screen. This is the Fast menu and is one way of controlling the program: it can also be controlled by more conventional drop-down menus. To access the drop-down menus press the right mouse button when the mouse pointer is at the top of the screen. Most of *Ani ST*'s functions are accessed from these two menus.

## GET ANIMATED

To see what some of the demonstrations included on



The Fast menu in *Ani ST* comes up as soon as the program is loaded. It gives access to most of the program's functions quickly and easily, with each icon performing functions that would normally be only available from drop-down menus

## ST INFORMATION

**PROGRAM:** Ani ST

**DESCRIPTION:** Animation package

**FOLDER:** ST/ANIST

**FILE(S):** ANIST.DOC, ANIST.PRQ, CPSCR.TTP, EEL.STR, FISHLOOP.STR, FLUER.SCR, FRAGS.SCR, LITTLESE.SCR, PLANTLOO.STR, PLTLOOP2.STR, REEF1.NEO, TETRA.STR

the disk are like, when the program first loads click on the icon in the Fast menu box that looks like a disk. This brings up a selection of files, all of which have the suffix .SCR.

There are three such files on the disk, all of which are listed at the left of the box: FLUER, FRAGS and LITTLESEA. All of these are different animations, with LITTLESEA being the most impressive.

To load one of these, select the file you want and then click on LOAD. Once the file is loaded, exit the file box to bring you back to the Fast menu selection screen. Click on the icon that looks like a film projector (the bigger one which is to the right of the Exit icon).

The animation will then be displayed on-screen.

## ST BACK-UP COPY

- 1 Format a **least one blank disk**
- 2 Write protect the original *Express* Cover Disk (with the notch open so you can see the hole through the disk) and insert it into the drive. If you've got two drives, insert the Cover Disk into drive B. Double click on the drive B icon to open a window showing the contents of the Cover Disk. If you've only got a single drive a message appears asking you to put disk B in drive A. Just click on OK.
- 3 Insert one of the blank formatted disks into drive A (removing the Cover Disk if you only have one drive). Double click on the drive A icon and open up another window. You may be asked to insert disk A in drive A - you already have, so do nothing and just click on OK.
- 4 Highlight the ST folder in the drive B Cover Disk window and drag it into the drive A window.
- 5 If you only have one drive, you're asked to insert disk A and disk B at regular intervals. Be careful not to mix the two disks up! Remember, Disk B is the original Cover Disk and disk A is the newly formatted blank disk.
- 6 Don't try to use the standard Atari disk copy (dragging floppy A onto floppy B) function as it won't work.

## FANCY CONTRIBUTING? THEN FILL IN THIS FORM

NAME: .....

BRIEF DESCRIPTION: .....

ADDRESS: .....

TELEPHONE: ..... (day) ..... (night)

COMPUTER: Amiga Atari ST PC The name of the program is:

SIZE OF FILE(S): ☐ K

TYPE OF SOFTWARE: ☐ Business application  
☐ Game  
☐ Music program  
☐ Novelty

Technical utility  
 Art program  
 Educational  
 Other

CHECKLIST:

README.DOC file included on disk  
 Printout of README.DOC (if possible)  
 Disk is labelled with your name, address, phone number  
 Disk is certified virus free

DECLARATION: This program is submitted for publication by *New Computer Express*. I have totally written it myself, and I agree to indemnify Future Publishing against any legal action that may arise due to copyright problems.

SIGNED: .....

DATE: .....



# PC

## SMARTART CLIP ART

While desktop publishing (DTP) packages can make a document look more professional, the fact that some of these pages consist of only text makes them look boring. Wouldn't it be great if you could incorporate small pictures into your documents to make them look a bit more exciting? Well now you can!

On the Cover Disk this week we have a selection of *SmartArt* clip art images from Panthersoft. Clip art images are small pictures which can be incorporated into DTP documents to add a graphical touch.

These images are in the .PCX format, used by most popular DTP and graphics packages on the PC.

## TO USE THE CLIP ART

Before you do anything with the Cover Disk you must do two things. Firstly, write protect the disk by moving the notch in the top right corner of the disk so that you can see a hole through it. And after that, make a copy of the disk using the instructions in the PC Back-up copy box elsewhere on this page.

Once you've made a back-up of the disk, the clip art file (it is a single archived file made up of quite a few images) has to be copied to another blank disk. If you go to the PC directory on the Cover Disk (type A: or B: depending on which device your 3.5-inch drive has been assigned as) you will see three main files: CLIPART.LZH, LHARC.EXE and LHARC.MAN. These files need to be copied to either your blank formatted disk or your hard drive.

## HARD DRIVE INSTRUCTIONS

To make a directory on the hard disk to copy the files to, enter C:\ to change to your hard disk and type MD CLIPART to create a directory called CLIPART.

Now, go back to the drive you have put the Cover Disk in and copy the files from the disk to your hard

drive. To do this, type CD PC (if you're not already in the PC directory). Then enter: COPY CLIPART.LZH C:\CLIPART.

Repeat the commands to copy LHARC.EXE and LHARC.MAN, by replacing the CLIPART.LZH filename in the above instructions with LHARC.EXE and then LHARC.MAN.

## FLOPPY DISK INSTRUCTIONS

To copy the files to another floppy disk, insert the Cover Disk and go to the A:\ drive (or B:\ depending on which drive your 3.5-inch drive is). To copy the file, enter CD PC to change to the PC directory. Then type COPY CLIPART.LZH B:.

Repeat the commands to copy LHARC.EXE and LHARC.MAN, but replace the CLIPART.LZH filename with LHARC.EXE and then LHARC.MAN.

## DEARCHIVING

Once you have made a copy of the disk, the CLIPART.LZH file needs to be dearchived. In basic terms archiving turns a number of separate files into a single file which is smaller than all the separate files put together.

Before you extract the file, format a blank disk to save the dearchived files to. See your MS-DOS manual for instructions on how to do this. Next, insert your back-up copy of the Cover Disk in your internal drive. Change to that drive if you are not already accessing it.

To dearchive the file, enter: LHARC X CLIPART.LZH B:. This will extract the file to the other floppy drive, if you have two drives, or it will ask you to insert a disk for the computer to treat as drive B:. You will be asked to swap disks a number of times, so be patient. The programs will be extracting each time you swap disks.

If you have a hard drive, you can either extract from the floppy disk you copied the Cover Disk files to, or the directory on the hard disk they were copied to.

To extract from the hard disk, change to the directory you copied the files to, for example: CD CLIPART. Then, enter: LHARC X CLIPART.LZH C:\CLIPART.

To extract from the floppy disk, first make a directory to save the files to on your hard drive: MD CLIPART, then CD C:\CLIPART. Then, change to the drive the floppy disk is in (A: or B:) and enter: LHARC X CLIPART.LZH C:.

The CLIPART.LZH file will then be broken up into a large number of smaller clip art images.

## COVER DISK 5

### PC INFORMATION

**PROGRAM:** SmartArt Clip Art  
**DIRECTORY:** PC  
**DESCRIPTION:** Graphic images  
**FILE(S):** CLIPART.LZH, LHARC.EXE, LHARC.MAN

**NOTE:** MS-DOS must be loaded on your system before you use the Cover Disk

## IMPROVE YOUR IMAGES

To use the clip art images, load up a DTP, graphics or paint package and import the clip art images as .PCX files to use in your documents. To see how to do this, look at your program's manual.

## WANT MORE?

The *SmartArt* clip art images included on this week's Cover Disk are but an example of those available from Panthersoft. To find out what other images the company produces, contact Panthersoft at: 2 Riverway Gardens, The Meadows, Nottingham NG2 3LL. Telephone 0602 860664.

### PC BACK-UP COPY

- 1 If you've only got a floppy drive-based system, format at least one blank disk. Otherwise use your hard drive.
- 2 Write protect the original Express Cover Disk (with the notch open so you can see the hole through the disk).
- 3 Use the XCOPY command to make the backup. If you have only one floppy drive, load XCOPY from the system disk from drive A:\ with the S option to copy the files across. So, to copy the files across type: XCOPY A:\PC\\*.\* B:\S. Then it is just a matter of swapping disks in and out of the drive until the Cover Disk is copied. Don't worry if you think you must have two drives - the XCOPY command will treat your single drive as both, or it will copy to the B:\ drive. In fact, you do have two drives.
- 4 If you have a hard drive, put the Cover Disk in drive A:\, then type: XCOPY A:\PC\\*.\* C:\S to copy all the subdirectories to the hard drive.



ANT.PCX



BIRD01.PCX



BUILD016.PCX



CAR003.PCX



CARROT1.PCX



CAT1.PCX



COBRA03.PCX



CROWN1.PCX



DOG1.PCX



EAGLE2.PCX



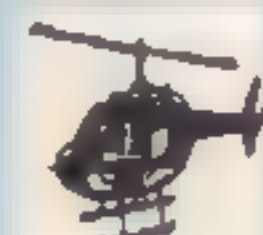
FISH1.PCX



FROG2.PCX



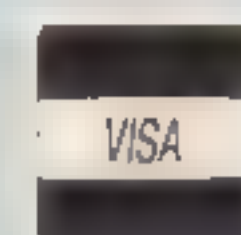
FURN001.PCX



HELICOP1.PCX



MONSTER3.PCX



OFF003.PCX



OFF007.PCX



OFF008.PCX



OFF009.PCX



OFF011.PCX



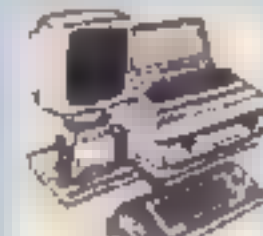
OFF012.PCX



OFF014.PCX



OFF016.PCX



OFF017.PCX



PANCAP07.PCX



PANCAP43.PCX



PEOPLE3.PCX



PEOPLE6.PCX



PEOPLE9.PCX



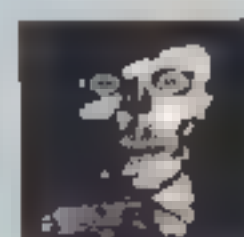
PEOPLE13.PCX



PRINCE.PCX



SHELL1.PCX



SKULL.PCX



SNAIL.PCX



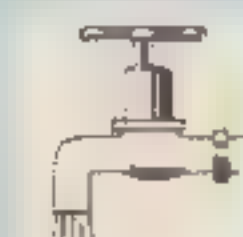
SPIDER1.PCX



SPORT001.PCX



TINA.PCX



VAR002.PCX



VAR004.PCX



VAR005.PCX



## VR TOOLKIT

**V**irtual Reality is one of those applications that is still very hard to define. Like multimedia, VR's capabilities are changing ■ rapidly that it's almost impossible to keep up with developments.

As soon as one developer pushes back the boundaries of VR, another is already hard at work pushing those boundaries still further. Aldermaston in Berkshire may seem like a rather unlikely place to find VR development, but look hard enough and you'll find a company that is not only ■ the forefront of developments, but could easily be credited as one ■ VR's originators.

## BORN OUT OF SUCCESS

In many respects, Dimension International is ■ new company, but it has the kind of pedigree behind it that very few other VR companies could even hope to match. Set up by Ian Andrew, the company was born out of the success of Incentive, a games development company which virtually defined the standards of 3D games in the late 80s.

Even today, Incentive's products continue to receive rave reviews from all quarters of the computer industry. Such games as *Castle Master*, *Total Eclipse*, *Darkside* and most recently its *3D Construction Kit* have earned the company money and recognition, allowing it to plough resources into its latest product, a leading edge VR system called the Virtual Reality Toolkit.

Based around a powerful 486 PC running at 33 MHz, the system Dimension International now uses for its VR development is a far cry from the 8 and 16-bit micros which still generate so much money for the company.

But with technology advancing at such a rate, it's only a matter of time before such systems become readily available to the computer user. Indeed, Dimension's system is only a taster of the kind of computers we will all be using in ■ few years time.

## GREAT S-SCAPE

The development of its 8 and 16-bit game titles have been instrumental in the development of the VR Toolkit, but the Toolkit is by no means just a port of Incentive's existing FreeScape System.

To gain maximum flexibility, Ian and his team of programmers developed a totally new VR system called SuperScape. Obviously much of what they had learned from FreeScape was brought over, but SuperScape ■ a far more modular system allowing ■ designers to enhance SuperScape with ease.

Many of the big names at Incentive have slaved away for three years to develop SuperScape. These include Sean Ellis (of Graphic Adventure Creator fame), Chris Andrew (author of Incentive's FreeScape system and Ian's brother), Paul Gregory and Eugene Messina (incidentally, winner of last year's Edinburgh Festival animation competition).

## SUPER SYSTEM

The system itself runs on a powerful 486 PC compatible backed up by some impressive hardware. For starters, the 256-colour display is handled by a SPEA FGA graphics board with a TMS34020 video processor with the output from this silicon beauty being piped to a 20-inch SPEA high resolution monitor. This replaces the headset found in most other VR systems. With crisp and



• The VR Toolkit offers a maximum Virtual Reality size equivalent to the size of the British Isles with 1mm accuracy, so there's plenty of room to manoeuvre

# PUSHING BACK THE FRONTIERS

**Dimension International's Virtual Reality Toolkit pushes VR development beyond the industry's wildest expectations. Jason Holborn meets the men behind the imaginary worlds...**

colourful images (which don't flicker like headset-based systems!), this combination allows for some of the most impressive VR scenes you're ever likely to see.

Perhaps the most unusual part of the system is its controller. Although a mouse is also employed, most of the interaction between the user and his VR world ■

carried out via an expensive trackerball-like device called a SpaceBall costing (would you believe?) £1,000!

Designed specifically for VR applications, the SpaceBall offers six axis of movement (12 directions), allowing for complete proportional freedom of movement in your 3D world. Although it initially takes some getting used to, using the SpaceBall eventually becomes second nature.

The current release of the VR Toolkit only supports the SpaceBall and a mouse, but Dimension fully intend to build ■ support for such VR wonders as the DataGlove and perhaps even the headset. Aslan Andrew is keen to point out that implementing support for these devices should be very easy, thanks to the system's modular design. All that would be required is a driver which could be easily installed by an existing user.

## SNIP INTO SNAPSHOT

The VR Toolkit consists of three distinct modules, all of which are needed to construct and then use your 3D worlds. The first is the Visualiser, which is used to actually 'run' your VR world. The current release of the visualiser does nothing more than run VR applications,



• Not just a graphical illustration of what's inside your car - the crankshaft, pistons and spark plugs in this image actually move to demonstrate how a engine's design works in practice



but Dimension has big plans for the future. For starters, ■ 'snapshot' mode may well be built into a future release which will allow a ray traced image to be generated from a user specified frame. This would be particularly useful to a client who requires a photo-realistic copy of a particular scene. Other future enhancements include light source shading and perhaps even texture mapping.

## FUZZY DISTINCTIONS

As you can already start to appreciate, the addition of such features will make Dimension's VR system even more realistic, making the distinction between VR and the real world even fuzzier. Whilst the Visualiser is runtime only, the next two modules permit you to build your own 3D worlds. These are the World Editor and the Shape Editor. As the name suggests, the Shape Editor is used to construct objects to inhabit your 3D world.

Running from a friendly icon-based front end, objects are created either graphically or by entering a series of numbers as co-ordinates. Although more complex objects can contain hundreds of individual facets (polygons), entering each as a series of numbers allows greater precision. Real life objects can be keyed into the system and used in your 3D world as if they were actually there. These objects can also be stored



• Once objects are created in the shape editor they can then be placed into a virtual world model using the world editor. The chair in this picture can be moved and the desk drawers and cupboard doors opened

Objects can also be literally 'programmed' using a sophisticated scripting language so that they behave in a specified manner when subjected to various events such as real life forces. For example, gravity and momentum can be built into an object, causing it to behave as it would in the real world. Objects can also affect each other, a chair thrown at a window would cause it to smash and so on.

testing, several beta test sites are already using the system. Among these is Nottingham University which is using it to examine perception, orientation and control issues, to study Virtual Reality as feedback in remote control tasks, the training of children with learning difficulties in the carrying out of simple psycho-motor or decision-making tasks and other high-brow projects along these lines.

The Americans too have been very quick to take notice of the VR Toolkit. Dimension has already been approached by several major US-based Virtual Reality hardware developers. Although the Americans lead the way in VR hardware development, the company is keen to point out that they lack the software tools necessary to take full advantage of that hardware.

## VISUAL BENEFITS

Dimension also sees the system being of particular use to the construction industry, enabling architects and designers to visualise how buildings will look. Models had previously been used for this task, but the benefits of VR will allow architects to walk around the building as if it were real, opening doors and viewing the building from any angle.

The system can also be used for planning security systems (the layout of video cameras, for example), interior design, interactive advertising, film and TV production, garden and park landscaping and much more besides. Indeed, there are so many different applications for a system like the VR Toolkit that the only limitation is the user. Clichéd maybe, but nevertheless true.

Being able to visualise just about anything in true 3D and interact with it as if it were in the real world is simply stunning, especially when it is so quick and easy to construct.



• Using the shape editor's powerful animation facilities objects can be brought to life, reacting to forces such as gravity and momentum, behaving as they would in the real world

within a library, allowing you to import the object and use it in any 3D world.

Objects needn't remain static either. Using the Shape Editor's powerful animation facilities, single or multiple objects can be brought to life. To make things even more realistic, various aspects of the animation can be controlled dynamically. These include fuel (the lifespan of the animation), speed and acceleration.



Once you've created all your objects, the next step is to bring them together within your 3D world. The VR Toolkit offers a maximum VR size equivalent to the size of the British Isles with 1mm accuracy, so there's plenty of room to manoeuvre. Objects can either be placed by co-ordinates or by moving them manually using the mouse.

Although the VR Toolkit is still undergoing final

## WHAT PRICE VR?

Although the hardware requirements stay the same, the VR Toolkit is available in several configurations. For those don't want to create their own VR worlds, Dimension sells a turnkey system called Desktop VR. This consists of all the VR hardware (CPU, monitor, graphics board and Spaceball) and the SuperScape Visualiser software (which is basically a runtime system for VR worlds constructed within the VR Toolkit).

How much for this beauty? Well, even this basic system is going to set you back almost £15,000. Obviously the basic Desktop VR system won't enable you to create your own VR worlds, but it's an ideal system for installation within museums, etc. The VR worlds can be created in order by Dimension International, saving the customer the cost of the complete system. No price is quoted for this service, so you'll have to phone the company yourself to obtain a quote.

If you fancy taking on the task of creating 3D worlds yourself, then you'll have to part with another cheque for a further £12,337. This buys you the rest of the SuperScape software which includes all the tools you need to create your VR World. It may seem like rather a lot of money to fork out for a couple of disks, but don't forget that Dimension's VR Toolkit is leading edge stuff!



• Running from an icon-based front end, objects are created graphically or by entering numbers as co-ordinates. Complex objects like this one can contain hundreds of polygons



Send your order to :  
**CRAZY JOE'S**  
 DEPT. AS11  
 145 EFFINGHAM ST.  
 ROTHERHAM  
 SOUTH. YORKSHIRE  
 S65 1BL

Please make cheque / p.o.  
 payable to 'CRAZY JOE'S'

# Crazy Joe's

*We take your fun seriously!*

**CREDIT CARD HOTLINE**  
 (0709) 829286  
**FAX ORDERS**  
 (0709) 878308  
**MINIMUM CREDIT**  
**CARD ORDER £3**  
**24 HOUR SERVICE**

## Amiga Public Domain Software

**KEY TO ABBREVIATIONS :** (2) = Number of disks in set; \* = 1 meg; \*\* = 2 meg; (2D) = 2 drives; (X) = Adults Only

### DEMOS / ANIMATIONS

298 Unicycle Animation \*  
 399 NewTek Demo 3 (2) \*  
 483 Elvira Demo  
 646 Predators Megademo (2)  
 744 Red Sector Cebit Demo  
 747 Popeye Meets The Beachboys  
 773 Shark Animation \*  
 925 Budbrain Megademo (2)(X)  
 953 Dragons Lair Demo \*  
 985 Coma Demo  
 995 Trip To Mars  
 997 Scoopex Mental Hangover  
 998 Madonna Cartoon Animation \*  
 954 Turtles Demo  
 1001 Station at Khern (3) \*\*  
 1033 At The Movies Anim \*\*  
 1105 Cronics Neverwhere Demo  
 1188 Fillet The Fish  
 1200 Raiders of the Lost Ark Anim \*  
 1229 Budbrain 2  
 1238 Evil Dead Demo (X) \*  
 1453 More Aerotoons \*  
 1540 Amy vs. Walker Anim \*  
 1541 Batman Animation \*  
 1551 Too Much 3D \*  
 1552 Magician Animation V2.0 \*  
 1580 Phenomena Enigma Demo \*  
 1628 Do The Bart, Man \*  
 1650 Cronics : Total Destruction \*  
 1664 Silents : Blue House ■ \*  
 1667 More Classy Animations \*  
 1692 Basketball Animation \*  
 1701 Tron Animation (2) \*  
 1703 Total Respray  
 1704 Total Recount  
 1705 Total Restyle  
 1706 Total Retrial  
 1707 Decay : Simpsons Demo \*  
 1753 Life Of Brian (2)  
 1766 Laurel & Hardy (2)(2D) \*  
 1775 Total Confusion \*  
 1782 Carrott : The Chicken (2)(2D)  
 1784 Carrott : Insomnia (2)(2D)  
 1818 Darkness Megademo 2 \*  
 1820 Magnetic Fields Demos 92  
 1823 N-n-n-n-nineteen Demo  
 1833 Agatron Animations 33  
 1834 Agatron Animations 34  
 1837 Plasmux Demo  
 1838 Global Trash Demo  
 1841 Anti-Lemmin' Demo (2) \*\*  
 1843 Phenomena Interspace  
 1844 Goldfire Megademo  
 1845 Timex Demos \*  
 1846 Enterprise Animation ■ (2D) \*  
 1850 The Wall (6)(2D) \*  
 1858 Betty Boo Anim / Slideshow  
 1877 AMOS 3D Demo  
 1991 Mike Tyson Knockout Disk  
 1885 Robocop Animation \*  
 1892 Shuttlecock Animation \*  
 1900 Silents : Ice Demo  
 1902 Tomsoft: Virtual World  
 1923 Star Wars Demo (2)(2D) \*  
 1928 Demo Dolly Pack 4 \*  
 1929 Vector Dance  
 1943 Windsurfer Animation (2) \*  
 1947 Mr Potato Head \*  
 1948 Mr Potato 'Chips Are Up!' \*  
 1950 Super Woman Animation \*  
 1956 Creature Comforts Demo

### GAMES

315 Return To Earth  
 488 Holy Grail Adventure \*  
 498 Wanderer  
 648 Star Trek (USA) (2) \*  
 880 Learn & Play (2)  
 727 Star Trek (Richter) (2)  
 788 Treasure Hunt  
 957 Pipeline  
 962 Drip!  
 987 Snakepit  
 991 Jeopard \*  
 1004 Games Disk 9  
 1113 Wet Beaver Games  
 1230 Dragon Cave  
 1245 Rings Of Zon \*  
 1408 APD59: Super Quiz  
 1411 APD62: Arcadia  
 1510 Pick Up A Puzzle (2) \*  
 1512 Picture ■ (2) \*  
 1517 APD110: Crossfire \*  
 1520 APD115: Balloonacy  
 1528 APD130: The Wooden Ball \*  
 1531 Simon Says / Space Maths  
 1532 APD137: Tile Trial \*  
 1533 The Jar \*  
 1539 Megaball \*

#### GAMES PACK

37 titles on 8 disks  
 including Asteroids, Sys, Tiles,  
 Bally 2, Pool, YachtC,  
 Invaders, H-Ball,  
 Fruit Machine, Block Off,  
 Shoot Out, Peter's Quest \*  
 and many more!

**8 DISK SET ONLY £8.00**

1544 Seven Tiles  
 1558 Adventure Solutions (2)  
 1573 APD142: Pair Crazy  
 1577 APD148: Fruit Machine \*  
 1579 APD148: Demolition Mission \*  
 1580 APD149: Gobbit / Pontoon \*  
 1584 APD153: Missile Command  
 1591 APD180: Quizmaster \*  
 1608 APD178: Mastermind/Pair Up \*  
 1610 APD190: Dungeon Delver (2)  
 1612 APD182: Pixie Kingdom (2)  
 1668 Tomtespetlet  
 1670 Wheel Of Fortune  
 1680 Hints Disk One  
 1700 Terror Limer ■ (X)  
 1711 Mental Image Games Disk 1  
 1715 Frantic Freddie  
 1720 Cabaret Asteroids  
 1746 Word Games Volume 1 \*  
 1747 Word Games Volume 2 \*  
 1748 Strategy Games \*  
 1749 Truckin' (2)(2D)  
 1780 Arcade Game Cheats 1  
 1790 Serene ■  
 1827 Scum Haters  
 1832 Pom Pom Gunner \*  
 1879 Sea Lance \*  
 1882 S.E.U.C.K. Simpsons Game  
 1883 Bionix II \*  
 1905 J Nicklaus Course Disk 1  
 1918 Air Ace II  
 1926 Napoleonic Warfare System \*  
 1945 Island of Nephotons Adventure  
 1949 Dungeon Master Companion

### MUSIC

052 Awesome Sounds  
 057 PSB : Suburbia  
 061 Definitive J. M. Jarre  
 067 Power Surge  
 109 Amiga Chart 3  
 166 Vangelis \*  
 187 Crusaders : Audio X  
 204 Sound Atax 2  
 237 Zee's Hip Hop Music  
 407 CD Player Demo \*  
 408 Crusaders : Free'd Out!  
 418 Electric Youth (2)  
 497 Amiga Chart 5  
 552 Music Invasion 3 (2)  
 654 Powerlords : Power Mix 2  
 700 Digital Concert IV  
 713 Flash! - Queen  
 722 Beatmaster Club Mix  
 724 Technotronic Remix  
 746 Crusaders : Bacteria  
 824 Digital Concert V  
 858 Sonix House  
 868 Pan 3 Music Disk  
 914 Special Brothers Music ■  
 935 Madonna : Hanky Panky  
 940 Hooked On Sonix  
 941 Soundtracker Jukebox  
 969 100 C64 Games Tunes  
 970 The Comic Strip Remix  
 978 Scoopex : Beast Sonix

#### SOUNDTRACKER SPECIAL

Make your own music on  
 the Amiga! This pack includes  
 the programs, songs, modules  
 and instruments - enough to  
 get you started and  
 keep you going for hours!

**8 DISK SET ONLY £8.00**

986 Amaze : Revolutions  
 993 PSA Music Demodisk 1  
 1026 Digital Concert VI  
 1107 Stop Right Now! \*  
 1292 Crusaders Does Genesis  
 1630 Accession : Sun Wind  
 1685 Depeche Mode Music Disk  
 1694 Art ■ MED Music Disk  
 1695 Seal : Crazy Remix \*  
 1698 SDFC : Sounds Dr Digital  
 1713 Spaced Out Vol. 1  
 1714 Spaced Out Vol. 2  
 1716 I Think We're Alone Now  
 1717 Everybody Dance Now  
 1718 Betty Boo : Doing The Do  
 1755 Amazing Tunes 2 (3) \*  
 1763 Asmond Gallant Knight (3) \*  
 1772 Taipan Music Disk (2)  
 1776 Crusaders : Sheet Music  
 1777 Beatmasters : Technology  
 1787 Magnetic Beats 2  
 1788 Magnetic Beats 3  
 1821 Academy Music Collection  
 1822 Brainstorm : Best Of Grubi  
 1824 SCR Musax 2  
 1828 Sgt Pepper Revisited (2)(2D) \*  
 1831 Vega Music  
 1821 Computer World Music 3 \*  
 1927 Here Comes The Hammer

### SLIDESHOWS

030 J.O.E. Slideshow 2  
 078 Vallejo Fantasy Art ■  
 084 Mega Art Disk  
 163 NASA Slideshow  
 167 DigView Slideshow  
 171 Patrick Nagel Pictures  
 185 Escher Slideshow  
 238 TV Sports Basketball  
 262 Forgotten Realms  
 299 Roger Dean Slideshow  
 357 Max's Art Disk 1  
 411 Photofile Portfolio (2)  
 572 Utopia : Photomontage 1  
 573 Utopia : Photomontage 2  
 617 Neighbours Slideshow  
 725 Diggy Piggies (2)  
 742 Madonna Slideshow  
 767 Cinemaware Slideshow  
 778 Exodus Real 3D  
 814 Viz Slideshow  
 831 Utopia Cartoon Slideshow  
 832 Utopia : Photomontage 3  
 983 Scream Queens (2)  
 978 Sun Slide III  
 991 Creepshow  
 999 Madonna Slideshow 2 (2) \*  
 915 Apol's Digishow \*  
 931 Heroic Dreams  
 942 Garfield Slideshow  
 968 Gorezone Slideshow (X)  
 1044 Desert Island Slideshow  
 1051 Total Recall Slideshow

#### GLAMOUR DISKS

For a full list send a stamped  
 addressed envelope to :

BLUE MOON  
 P.O. BOX 123

WATH-UPON-DEARNE  
 ROTHERHAM  
 S63 7DW

Please include a statement  
 saying you are over 18  
 (Blue Moon are not connected  
 with Crazy Joe's in any way)

1082 Golems Gate  
 1073 Fraxion Fantasy  
 1082 Annie Jones (Neighbours)  
 1085 Comic Slideshow (X)  
 1103 Girls ■ Sports Illustrated  
 1210 Turtles Slideshow  
 1263 Crusaders : Richter (2)(2D)  
 1272 Nemesis : Prologue  
 1277 Fraxion : Divine Visions (2) \*  
 1279 Forgotten Realms '90  
 1475 Nemesis : Chapter 1 (2) \*  
 1480 The Age Of Slack  
 1523 Nik Williams Demo  
 1548 Skywalker Digishow 1  
 1547 Skywalker Digishow 2  
 1561 Demons Slideshow 3 \*  
 1666 Mages Staff  
 1708 Invisible World Slideshow  
 1719 Yabba Dabba Cartoons  
 1781 Reflections Ray-Traced  
 1835 Night Breed Slideshow  
 1849 Film Posters Slideshow  
 1876 Reflections Ray-Traced 8  
 1901 Leeds United Slideshow  
 1919 Debbie Harry S/show (2)(2D) \*

### UTILITIES

081 UEdit Word Processor  
 119 Amiga MCAD  
 180 PageSetter Clip Art  
 210 Icons!  
 259 Ultimate Bootblock Coll. (2)  
 346 TV Graphics (2)  
 353 Showiz 2.0 (SS maker)  
 410 DPaint Cartoon Brushes  
 442 DPaint Fonts Disks (4)  
 458 HAM Radio Utilities (5)  
 546 Iconmania!  
 571 Jazzbench  
 580 Dope Intro Maker  
 591 Business Card Maker  
 595 Amateur Radio Disk  
 632 MSH (MessyDOS)  
 642 C Manual  
 661 Programming Disk  
 682 Sound Applications ■  
 684 Video Applications (2)  
 697 Graphics Management (2)  
 901 The Comms Disk  
 902 QED Text Editor  
 1071 NoisePlayer V3.0  
 1079 Prophecy : Coder Mag 1  
 1095 Database Workshop (2)  
 1097 DPaint / PageSetter Clip Art (2)  
 1099 Video Graphics (4)

#### HOME BUSINESS PACK

A suite of programs for those  
 who want to dabble on the  
 serious side of computing :  
 Nag, Bank'n, Journal, QBase,  
 Spread, Wordwright,  
 AmigaSpell, Inventory, MemoPad  
 and more!

**8 DISK SET ONLY £8.00**

1117 Genealogy \*  
 1225 Hardware Projects Mag  
 1228 ST Emulator (German)  
 1234 Tetra-Copy  
 1273 C-Light  
 1450 Virus Superkillers  
 1451 ElectroCAD  
 1452 AmiBase  
 1535 Master Virus Killer V2.0  
 1536 North C (packed)  
 1537 North C (unpacked) (2)  
 1545 SpectraPaint V3.0  
 1550 FlexiBase V2.0  
 1569 APD138: Language Tutor  
 1608 APD176: Database Master 2.0  
 1629 ZX Spectrum Emulator  
 1663 Dynamite Cut 'n' Paste Fonts  
 1658 Demolishers : 202 Utilities!  
 1678 Textplus Shareware WP  
 1880 DCopy & Utilities  
 1884 Equinox Intro Writer \*  
 1886 MED V3.1  
 1893 DICE V2.08A  
 1896 Desk Bench (3)  
 1906 PageSetter Clip Art (8)  
 1914 Slideshow Construction Kit  
 1942 Master Virus Killer V2.2  
 1951 King James Bible (3)  
 1954 Celtics Demo Maker  
 1960 RSI Demo Maker (English Doc)  
 1961 RSI DM Utility/Help Disk  
 1962 TSB 3D Vector Designers V1.1

These are just a few of the many disks in the library. For details of the others send 50p for our **CATALOGUE DISK** which also contains a **FREE** game!

#### PUBLIC DOMAIN PRICES

1 - 9 disks  
**@ £1.25 ea.**  
 10 or more  
**@ £1.00 ea.**  
 Price is per disk  
 NOT per title

#### BLANK DISKS, DISK BOXES & ACCESSORIES

##### BLANK DISKS

10 disks ..... £4.99  
 50 disks ..... £22.50  
 100 disks ..... £39.99  
 150 disks ..... £54.99  
 200 disks ..... £69.99

##### DISK BOXES

10 capacity ..... 99p  
 40 capacity ..... £4.99  
 50 capacity ..... £5.99  
 80 capacity ..... £6.99  
 100 capacity ..... £7.99

PLEASE NOTE PRICES MAY DIFFER FROM OUR SHOP PRICES

We now stock

**Deja Vu**

Licenceware

Priced @ £3.50 per disk  
 (2 disk sets @ £5.50)  
 Full details of titles on  
 our catalogue disk

#### POSTAGE

UK, Channel Isles....**FREE**  
**OVERSEAS AIR MAIL**  
 Europe, Eire ... £2.50  
 Rest of World ... £4.00

Please note that payment  
 must be in Sterling



# ON A SCREEN NEAR YOU...

The latest 16-bit software and hardware reviewed in this special double

**PRODUCT:** Prodata 1.2

**COMPATIBILITY:** Amiga

**FROM:** Arnor Ltd

**CONTACT:** 0733 68909



• Manage those facts and figures with ProData 1.2

The Amiga has never been treated as a serious contender within the corporate market, despite some quite heavyweight business packages now being available. With spreadsheets, word processors and databases available aplenty, the Amiga still remains in the shadow of the PC.

The latest business-orientated release for the Amiga is *ProData 1.2*, a major upgrade to Arnor's existing *ProData* database system. Running on a bog standard A500, *ProData* offers many powerful features previously only found in PC-based databases. You can create records containing up to 300 fields with dynamic field length adjustment. Files can have up to five indexes which may use supplementary sortfields, instant switching of indexes to change sorting method and a lot more besides.

*ProData 1.2's* improved user interface now fully supports Intuition pull-down menus making it far easier to use. Other enhancements include improved label printing (you can now print two labels on a single sheet), instantaneous filtering, automatic record numbering and the ability to merge two databases together. When creating forms, you can enter details into fields in any

order, giving the user the flexibility to go back and edit any field without having to flick back through previous fields. *ProData* is by no means a *SuperBase Pro 4* killer, but it's a powerful system nonetheless. If you require a no nonsense database which is powerful enough to tackle the toughest jobs, yet is easy enough to use for beginners, then *ProData 1.2* is worth checking out. ■

## A POWERFUL PRODUCT?

### FOR

- ▲ Easy to use
- ▲ Very powerful
- ▲ Comprehensive sorting and indexing

### AGAINST

- ▼ User interface is still a little basic
- ▼ You cannot produce applications

**COST:** £100 **VALUE:** Good

**COMPETITION:** *SuperBase Professional 4*, *InterBase 2.0*

**PRODUCT:** Invision Plus

**COMPATIBILITY:** Amiga1500/2000

**FROM:** HB Marketing

**CONTACT:** 0753 686000



• Now you too can give the BBC a run for its money with Invision Plus

Invision Plus has been available Stateside for a while now, but us poor UK Amiga users have only just got our hands on it. Comprising of a plug-in card for the Amiga 1500 upwards and some fancy software, Invision is a professional standard video effects system based on A-Squared's brilliant real time video digitiser *Live!*

With Invision Plus installed inside your machine, you can create weird and wonderful video effects by connecting a standard composite video signal to the back of your Amiga. Invision Plus works by processing the incoming signal in realtime, adding effects as it goes. It can be used for a variety of applications including music videos, film and television work.

You can add strobes, wild colours, mirrors and shadows. What's more, you can even create your own effects. The program consists of three modules - the environment screen, the preset screen and production mode. The Environment Screen enables you to assign video effects to keys. Each key holds colours and various mouse controlled effects. The real fun starts when you move to the Preset screen which enables you to create effects yourself. You can modify colours, deciding what effect will be enacted when you click a mouse button, and set up keys to capture and playback

frames or mix imagery. In Production mode, you press keys to apply effects to the incoming video, controlling them with the mouse. Since there are no menus or graphics on the screen, the output can be recorded directly to video tape for video post production use.

Invision Plus is by no means a budget Video Toaster, but it gets pretty close. When used with a genlock and a decent video source, some astounding effects can be created. Highly recommended. ■

## CREATIVE COSTS

### FOR

- ▲ Very powerful video effects system
- ▲ Works in realtime
- ▲ Very easy to use

### AGAINST

- ▼ Effects are only let down by the resolution of the Amiga itself

**COST:** £579 **VALUE:** Good

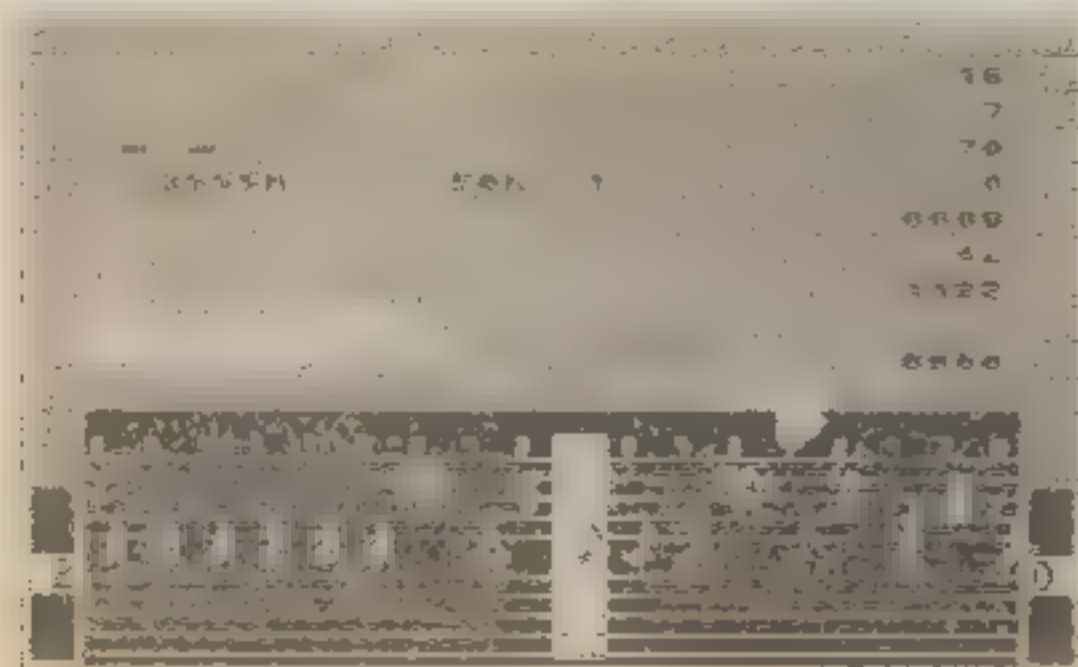
**COMPETITION:** Video Toaster

**PRODUCT:** Audio Sculpture

**COMPATIBILITY:** ST/STE

**FROM:** Software Management Group

**CONTACT:** 0274 566155



• With Audio Sculpture you can create songs in minutes and then add a variety of effects

Most non-MIDI music sequencing software falls into two categories: easy-to-use, but inflexible; or versatile, yet bewildering. *Audio Sculpture* is the first we've seen that falls halfway between the two - it's versatile and handy too.

It's also multi-talented. As well as acting as a four-track pattern sequencer, it can also take and edit samples, print the current instrument's stave (even while it's playing), create robotic speech from typed-in words, and show the frequency distribution on a real-time spectrum analyser. *Audio Sculpture* is mouse-controlled, but you can control the recording of notes using the ST's keyboard, or you can input MIDI data from a controlling MIDI keyboard. Using MIDI is a great advantage because programming in step-time with the ST's layout is a bit clumsy.

Although the poorly-translated manual doesn't help much, you can create songs within minutes. Sample waveforms can be created by drawing them on screen, or loading them from disk or sampling cartridge (ST Replay, Mastersound and STOS Maestro cartridges can all be accessed directly). Then you can add fades, filter the waveshape and change the volume levels before

linking them together in the main pattern editor

*Audio Sculpture* can hold up to 64 patterns, each containing up to 64 notes. Patterns can later be linked with the sequencer to play in any order. Up to 128 links can be stored, with options to restart the tune in different places as it loops. By far the most usable of all the lower-budget music packages, *Audio Sculpture* is certain to turn on ST musicians and demo-makers. ■

## HOW DOES THAT SOUND?

### FOR

- ▲ Packed with features
- ▲ Works with most sampler systems

### AGAINST

- ▼ Poor manual translated from French

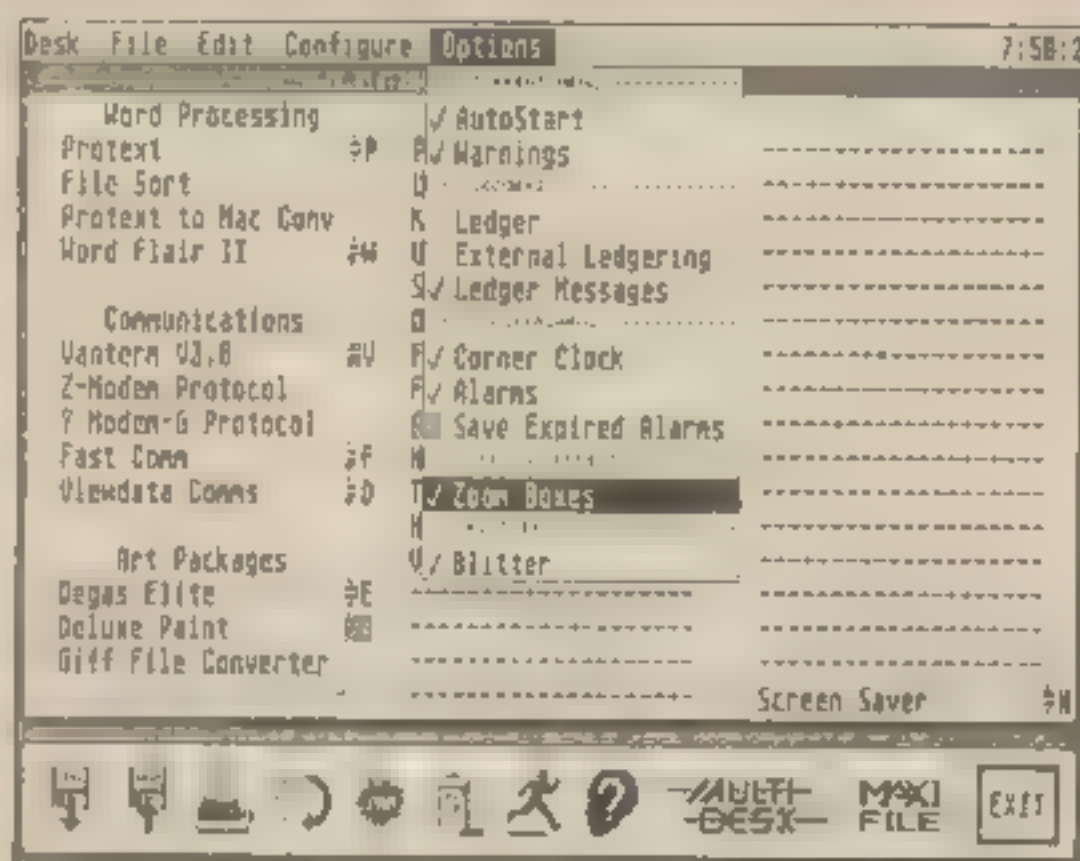
**COST:** £49.99 **VALUE:** Excellent

**COMPETITION:** *MasterSound 2*, *ST Replay*, *Stereo Replay*, *MPH Monster Sound Cartridge*, *Quartet*, *TCB Tracker*, *NoiseTracker*



## REVIEWS

**PRODUCT:** Hotwire  
**COMPATIBILITY:** ST  
**FROM:** System Solutions  
**CONTACT:** 0753 832212



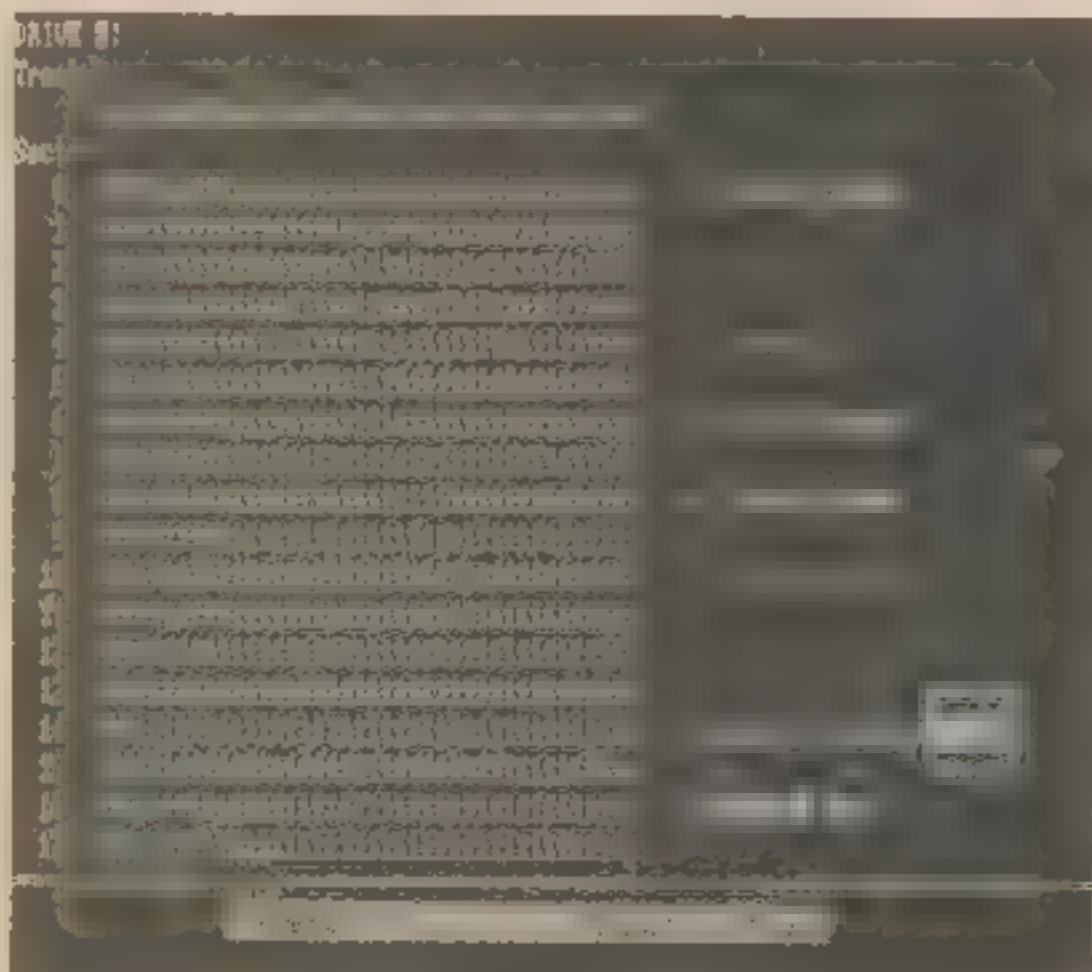
• Why waste time hunting for lost files and folders when you can leave the job to Hotwire? It can get things going at the touch of a button

**PRODUCT:** ICONtroller  
**COMPATIBILITY:** PC  
**FROM:** Suncom Technologies  
**CONTACT:** 0453 753565



• Suncom Technologies brings you a mouse to use on the move – the ICONtroller

**PRODUCT:** DDK Toolkit  
**COMPATIBILITY:** ST  
**FROM:** Kuma  
**CONTACT:** 0734 844335



• Kuma's DDK Toolkit could be excellent for experts, but beginners should be wary

Even with GEM or other window, icon and menu environments, accessing your favourite files can be a pain – you've still got to search through the folders before you can double-click on the file you need.

Hotwire, from American utility-software company CodeHead, can change all that. By running a simple set-up procedure, you can tell your ST to remember single-keypress commands and use them to run files automatically. All you need to do is remember the keys you have selected and then press the one which corresponds to the program you want executed.

But Hotwire isn't just a program-launcher – it can keep all sorts of statistics about the programs you run. Each time you run a program a timer is started. When you leave the program, you can find out how long you spent working with it – useful if you need to account for the time you spend on each job. Hotwire also has eight alarms to remind you of important things. Each alarm can be configured to display a text message of your choice, interrupt your current job, or sound an alarm.

Hotwire interfaces well with CodeHead's other software. HotSaver, a screen saver, talks to Hotwire when it blanks the screen, so that the elapsed-time ledger doesn't include time spent with the monitor disabled as 'work time'. Hotwire also works with MultiDesk and can be configured to automatically select

chosen desk accessories to be loaded with programs – again at the touch of a single key.

For the casual user, Hotwire is a good way of customising your ST to speed up your regular use. For the professional or business user, Hotwire is a powerful tool which can save you time and help you keep track of your money. You can even protect your private programs with passwords if you need to.

For its price, Hotwire offers a great deal of power and flexibility. If you're serious about your ST, take time out to save some time – it's too good to miss out on. ■

## HOW HOT IS IT?

## FOR

- ▲ Holds shortcuts for 400 programs
- ▲ Lots of useful extras

## AGAINST

- ▼ Not as useful for hobbyists as it is for business users

**COST:** £29.95 **VALUE:** Excellent

**COMPETITION:** None Known

These days, every man and his dog are trying to convince the laptop users of the world that they need a mouse. This may well be true, what with the popularity of Windows and simplified mouse driven programs. But to use a mouse you need a flat surface to work on. So unless one of your legs have been deformed by a tragic road accident, you'll have to do without one – right?

Wrong. ICONtroller is a 'mouse' that sticks to the side of your laptop. Instead of the traditional mouse that is used on a table, ICONtroller resembles a mini-joystick. Each of the mouse motions are found along the bottom of this stick with rubber buttons that used to be found gracing the Sinclair Spectrum.

An additional single button is on the top of the stick and this can act as one of the three buttons below. You can set the switch to the left, middle or right, depending on which button you use most often (if you use the left button most, the switch is placed on the far left).

All mouse actions are taken over by the new joystick. Although at first this sounds attractive, this device does not serve its purpose. The buttons are ill placed and operations that involve using joystick and buttons proves near impossible.

The ICONtroller is an attractive package with all the accessories included. (carrying bag and extension

cable) but is let down by its poor design. Should you be desperate for a portable mouse then ICONtroller may prove useful – provided you have a hand smaller than a three-year-old. ■

## SHOULD YOU BUY IT?

## FOR

- ▲ Easy connectivity to laptops
- ▲ Compatible with both mouse systems and Microsoft drivers

## AGAINST

- ▼ Poor design
- ▼ Difficult to use during operations that use both movement and button
- ▼ Mounting must be permanently adhered to laptop

**COST:** £69.99 **VALUE:** Poor

**COMPETITION:** Logitech's Trackman Portable

When developing an application, the programmer needs to know more about his/her disks than provided by the basic {standard courier protocol} DIR {norm} and {standard courier protocol} CHKDSK {norm} commands available in DOS and this is where DDK toolkit steps in.

DDK is a small execution file that can easily find a home in a PC's utility directory. It provides a quick and easy way of retrieving information and could prove useful to programmers who need information on write sectors, file allocation tables and bad sectors on a disk. DDK's interface is spartan, only implementing the extended ASCII character set, but this does little to detract from the program, more over it enhances it.

DDK is compatible with the older generation of PC's and so it could be used for serious programming by someone who has not as yet upgraded their display.

All options found within DDK are accessed by single key presses. Although this means that there is no mouse option, the operation is simplified and prevents the user from making inadvertent changes to the delicate boot sector of a disk.

In some ways, the design of displaying information could have been better thought through. Anyone who has little experience with FAT's, write errors and start sectors, will feel that all they have been presented with are a number of coloured spreadsheets that only use the numbers 1 or 0. This is where an on-line help facility

would have been useful, but it seems that DDK has been designed by and for an expert. Even though the manual covers a great deal of ground, there is over use of jargon that will soon baffle the novice.

Some problems may well be encountered with this package. The instructions state that DDK may not operate with systems using DOS prior to version 4 and above. However, this program would not inspect my hard drive, even though it operates with MS-DOS 5.0. But it may well prove an invaluable aid to programmers that like to tinker with their program disks. ■

## DOES IT DO THE JOB?

## FOR

- ▲ Clearly displays information
- ▲ User friendly interface
- ▲ Compact programming to prevent cluttering up to much disk space

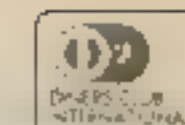
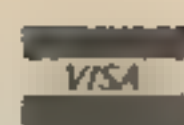
## AGAINST

- ▼ Too much jargon
- ▼ Incompatible with some versions of DOS

**COST:** £23.99 **VALUE:** Good

**COMPETITION:** None known





**Tel 0257 276800**  
Main office & 24 hour order line  
**Fax 0257 274753**  
**Help desk 0490 3284**  
Weekdays 3-4pm  
Overseas orders please add £5.00.  
All prices include P+P and VAT.

## WITH *Intraset Ltd*

Our compendium of gaming software uses your computer's intelligence and logic to predict winners and advise you on strategy. Whether you're an experienced punter or a novice, with a little time and our range of software, you can maximise your winning potential.

### COURSEMASTER

Our proven horse racing program for both FLATS or JUMPS £24.95

**\*NEW**

### TRACKMASTER

The Greyhound Racing Tipster £19.95  
Coursemaster & Trackmaster Twin Pack £39.95  
(Saving £4.95)

Using simple information from the racing card in daily papers or the racing papers, COURSEMASTER and TRACKMASTER will predict with consistent accuracy.

The winner is predicted as well as second and third places for tricasts. The programs also mention attractive long shots, recommend types of bets and most importantly warn when not to bet.

Successful betting extends beyond merely picking the winners and COURSEMASTER and TRACKMASTER will assist in managing your bets. They work out your winnings on the most popular types of bet including SINGLES, DOUBLES, PATENT, YANKEE, CANADIAN, print out your betting slips, and even maintain your betting bank account. SYSTEM BETS will regularly provide a system for MAJOR WINS with small stakes - try it and surprise yourself.

### COMPETITION Details and rules

Our company likes to see people winning, which is why we're running our fabulous 'Win a pc competition'. With every purchase you make, you will automatically be entered into the draw. You can also enter for free by sending a postcard to INTRASET.

1st prize - PC NT286 Colour  
2nd prize - Complete set of Intraset Business and Gaming Software  
3rd prize - Complete set of Intraset Gaming Software  
■ runners up will each win their choice of one Intraset title.

Intraset's decision will be final on all matters.  
Send an SAE for list of winners.  
Draw dates 28/2/92 and 28/9/92

### SPECIAL OFFER

POOLSMaster and COURSEMASTER together for £44.95 (Saving £4.95.)

Our complete gaming suite: £110.00  
POOLSMaster (British & Australian),  
PERM-MASTER, SPOT-THE-BALL,  
COURSEMASTER, TRACKMASTER  
Saving £22.70



# Intraset Ltd

Send an SAE for full catalogue

*'A licence to print money'* Mr FC Hammond of Essex who won nearly £10,000 in 16 weeks

*'We have won many thousands'* Mr PE Roberts of Dorset who so far has won more than £46,000

\*Copies of these and other endorsements from actual customers are available on request.

**POOLSMaster** British or Australian £24.95 each.  
Poolsmaster British and Australian £44.95 (Saving £4.95)

### The Football Pools Predictors

Developed after years of detailed study, POOLSMaster uses a unique scientific formula to predict Home, Aways and Draws. The FORM PREDICTION option analyzes result possibilities with amazing accuracy. The unique indexing system allows for quick entry of fixtures and results, and updates itself season after season so there is no need to buy a new copy each year. Poolsmaster also contains a unique coupon number sequence predictor.

Together, both Poolsmaster editions cover all British league and cup matches and the Australian league.

**PERM-MASTER £19.95**  
The perfect companion for Poolsmaster

Designed for users of PERM systems, PERM-MASTER ends the agony of checking by doing ■ for you. It comes complete with several of the top perms built in but you can also create your own with the unique PERM EDITOR and PERM CALCULATOR features. PERM-MASTER is fast and easy to use and can be used for most block and single line perms. Additional discs of top perms are available at £14.95 each.

All programs available for IBM/PC & compatibles, all Amstrad PC's, Amstrad PCWs, Atari, Amiga and CPC 6128. Coursemaster, Poolsmaster British and Trackmaster are also available for all Amstrad CPC's, all Spectrums and C64 & 128.

### SPOT-THE-BALL £17.95

There is no more need for counting 'x's or using messy rubber stamps. Simply tell your computer where you think the ball is using the screen template provided. It will give you a print-out of up to 540 micro-fine crosses in your chosen shape or it can chose at random for you. SPOT-THE-BALL learns week after week and builds up a database of results for the SEQUENCE PREDICTOR OPTION.

### GUIDE TO POOLS AND PERMS £14.95

The definitive guide to Pools permutations and betting systems

Written by the experts responsible for our successful software range. Master the fine art of prediction by reading this fascinating in-depth explanation of betting systems and perms. Plan a campaign for that elusive big win and use this books' tips on selecting the best matches and races and how to use perms to maximum effect on Pools, Horses and Dogs.

### INTEREST-FREE CREDIT

Spend over £80 and spread the cost at no extra charge! (Cheque purchases only.) Simply divide your order by 4 and send us 4 cheques each with your name and address and cheque guarantee number: Date the first cheque with today's date and post-date each of the other cheques by one month ie. 1/5/91, 1/6/91 etc. We will then hold each cheque until it is due.

Send cheques or postal orders to INTRASET LTD (DEPTNCE) FREEPOST, 10 Woodside Avenue, Clayton-Le-Woods, Chorley, Lancs. PR6 7BR.  
Phone or Fax for lightning service. All major credit cards accepted.



**UNIDEN SATELLITE RECEIVER** Brand new units (model 8008) £60.00 ref 60P4X also some 7007s also £60.00 ref 60P5X

**SPECTRUM +2 COMPUTER** Built in data recorder, 128K, psu and manuals £59.00 ref 59P4X

**SPECTRUM +3 COMPUTER** Built in disc drive, 128K, psu and manuals £79.00 ref 79P4X

**AMSTRAD CPC464 COMPUTER** No manuals but only £79.00 ref 79P5X

**AMSTRAD CPC6128 COMPUTER** Again no manuals but only £149.00 ref 149P4X

**AMSTRAD GT65** Green screen monitor £49.00 ref 49P4X

**AMSTRAD PORTABLE PC'S FROM £149** (PPC1512SD), £179 (PPC1512DD), £179 (PPC1640SD), £209 (PPC1840DD). MODEMS £30 EXTRA. NO MANUALS OR PSU.

**AMSTRAD PC BARGAIN!!!!**  
**PC 1512DD COMPLETE WITH CGA COLOUR MONITOR, 2 DISC DRIVES, MANUALS ETC ONLY £249.00 REF 249P4X**

**HIGH POWER CAR SPEAKERS.** Stereo pair output 100w each 4ohm impedance and consisting of 6 1/2" woofer 2" mid range and 1" tweeter ideal to work with the amplifier described above. Price per pair £30.00 Order ref 30P7X

**2KV 500 WATT TRANSFORMERS** Suitable for high voltage experiments or as a spare for a microwave oven etc. 250v AC input £10.00 ref 10P93X

**MICROWAVE CONTROL PANEL.** Mains operated, with touch switches. Complete with 4 digit display, digital clock, and 2 relay outputs one for power and one for pulsed power (programmable). Ideal for all sorts of precision timer applications etc. £6.00 ref 6P18X

**FBRE OPTIC CABLE.** Stranded optical fibres sheathed in black PVC. Five metre length £7.00 ref 7P29X

**12V SOLAR CELL.** 200mA output ideal for trickle charging etc. 300 mm square. Our price £15.00 ref 15P42X

**PASSIVE INFRA-RED MOTION SENSOR.** Complete with daylight sensor, adjustable lights on timer (8 secs - 15 mins), 50' range with a 90 deg coverage. Manual override facility. Complete with wall brackets, bulb holders etc. Brand new and guaranteed £25.00 ref 25P24X

Pack of two PAR36 bulbs for above unit £12.00 ref 12P43X

**VIDEO SENDER UNIT** Transmits both audio and video signals from either a video camera, video recorder or computer to any standard TV set within a 100' range! (tune TV to a spare channel) 12v DC op. £15.00 ref 15P39X Suitable mains adaptor £5.00 ref 5P191X

**FM TRANSMITTER** housed in a standard working 13A adapter (bug is mains driven). £26.00 ref 26P2X

**MINIATURE RADIO TRANSCEIVERS** A pair of walkie talkies with a range of up to 2 kilometres. Units measure 22x52x155mm. Complete with cases. £30.00 ref 30P12X

**FM CORDLESS MICROPHONE.** Small hand held unit with a 500' range! 2 transmit power levels reqs PP3 battery. Tuneable to any FM receiver. Our price £15.00 ref 15P42AX

**10 BAND COMMUNICATIONS RECEIVER.** 7 short bands, FM, AM and LW DX local switch, tuning 'eye' meter. £22.50 or battery. Complete with shoulder strap and mains lead. NOW ONLY £19.00!! REF 19P14X.

**WHISPER 2000 LISTENING AID.** Enables you to hear sounds that would otherwise be inaudible! Complete with headphones. Cased £5.00 ref 5P179X

**CAR STEREO AND FM RADIO.** Low cost stereo system giving 5 watts per channel. Signal to noise ratio better than 45db. wow and flutter less than .35%. Neg earth £25.00 ref 25P21X

**LOW COST WALKIE TALKIES.** Pair of battery operated units with a range of about 150'. Our price £8.00 a pair ref 8P50X

**7 CHANNEL GRAPHIC EQUALIZER** plus a 50 watt power amp! 20-21KHZ 4-8R 12-14v DC negative earth. Cased £25.00 ref 25P14X

**NICAD BATTERIES.** Brand new top quality 4 x AA's £8.00 ref 4P44X 2 x C's £4.00 ref 4P73X. 4 x D's £9.00 ref 9P12X. 1 x PP3 £6.00 ref 6P35X

**TOWERS INTERNATIONAL TRANSISTOR SELECTOR GUIDE.** The ultimate equivalents book. Latest edition £20.00 ref 20P32X

**CABLE TIES.** 142mm x 3.2mm white nylon pack of 100 £3.00 ref 3P104X. Bumper pack of 1,000 ties £14.00 REF 14P6X

## VIDEO AND AUDIO MONITORING SYSTEM



£99.00

Brand new units consisting of a camera, 14cm monitor, 70 metres of cable, AC adapter, mounting bracket and owners manual. 240v AC or 12v DC operation complete with built in 2 way intercom. £99.00 ref 99P2X

**1991 CATALOGUE AVAILABLE NOW IF YOU DO NOT HAVE A COPY PLEASE REQUEST ONE WHEN ORDERING OR SEND US A 6"x9" SAE FOR A FREE COPY.**

**GEIGER COUNTER KIT.** Complete with tube, PCB and all components to build a battery operated geiger counter. £39.00 ref 39P1X

**FM BUG KIT.** New design with PCB embedded coil. Transmits to any FM radio. 9v battery req'd £5.00 ref 5P158X

**FM BUG** Built and tested superior 9v operation £14.00 ref 14P3X

**COMPOSITE VIDEO KITS.** These convert composite video into separate H sync, V sync and video. 12v DC. £8.00 ref 8P39X

**SINCLAIR MOTORS** 12v 29A (full load) 3300 rpm 6"x4" 1/4"

O/P shaft New £20.00 ref 20P22X

As above but with fitted 4 to 1 inline reduction box (800rpm) and toothed nylon belt drive cog £40.00 ref 40P8X

**SINCLAIR C5 WHEELS** 13" or 16" dia including treaded tyre and inner tube. Wheels are black, spoked one piece poly carbonate. 13" wheel £6.00 ref 6P20X, 16" wheel £6.00 ref 6P21X

**ELECTRONIC SPEED CONTROL KIT** for C5 motor. PCB and all components to build a speed controller (0-95% of speed). Uses pulse width modulation. £17.00 ref 17P3X

**SOLAR POWERED NICAD CHARGER.** Charges 4 AA nicads in 8 hours. Brand new and cased £6.00 ref 6P3X

**MOSFETS FOR POWER AMPLIFIERS ETC.** 00 watt mosfet pair 2SJ99 and 2SK343 £4.00 a pair with pin out info ref 4P51X. Also available is a 2SK413 and a 2SJ118 at £4.00 ref 4P42X

**12 VOLT BRUSHLESS FAN.** 1/2" square brand new ideal for boat, car, caravan etc. £5.00 ref 5P208X

**ACORN DATA RECORDER ALF503.** Made for BBC computer but suitable for others. Includes mains adapter, leads and book. £15.00 ref 15P43X

**VIDEO TAPES.** Three hour superior quality tapes made under licence from the famous JVC company. Pack of 10 tapes £20.00 ref 20P20X

## AT 286 MOTHER BOARD

640K RAM

UPGRADABLE TO 4 M

AT CASE

AT POWER SUPPLY

AT KEYBOARD

MANUAL

NO I/O CARDS

£139

**CAR IONIZER KIT** Improve the air in your car! clears smoke and helps to reduce fatigue. Case required. £12.00 ref 12P8X

**6V 10AH LEAD ACID** sealed battery by yuasha ex equipment but in excellent condition now only 2 for £10.00 ref 10P95X

**12 220V INVERTER KIT** As supplied it will handle up to about 15 watt 220v but with a larger transformer it will handle 80 watts. Basic kit £12.00 ref 12P17X. Larger transformer £12.00 ref 12P41X

**VERO EASI WIRE PROTOTYPING SYSTEM** Ideal for designing projects on etc. Complete with tools, wire and reusable board. Our price £6.00 ref 6P33X

**MICROWAVE TURNTABLE MOTORS.** Ideal for window displays etc. £5.00 ref 5P165X

**STC SWITCHED MODE POWER SUPPLY** 220v or 110v input giving 5v at 2A, +24v at 0.25A, +12v at 0.15A and +90v at 0.4A £6.00 ref 6P59X

**HIGH RESOLUTION 12" AMBER MONITOR** 12v 1.5A Hercules compatible (TTL input) new and cased £22.00 ref 22P2X

**VGA PAPER WHITE MONO** monitors new and cased 240v AC. £59.00 ref 59P4X

**25 WATT STEREO AMPLIFIER** c. STK043. With the addition of a handful of components you can build a 25 watt amplifier. £4.00 ref 4P69X (Circuit dia included)

**LINEAR POWER SUPPLY** Brand new 220v input +5 at 3A, +12 at 1A, -12 at 1A. Short circuit protected. £12.00 ref 12P21X

**MAINS FANS** Small type construction. Approx 4"x5" mounted on a metal plate for easy fixing. New £5.00 5P166X

**POWERFUL IONIZER KIT.** Generates 10 times more ions than commercial units! Complete kit including case £18.00 ref 18P2X

**MINI RADIO MODULE** Only 2" square with ferrite aerial and tuner. Superhet. Req's PP3 battery. £1.00 ref 8D716X

**HIGH RESOLUTION MONITORS** black and white Philips tube in chassis made for OPD computer but may be suitable for others. £20.00 ref 20P26X

**BARGAIN NICADS AAA SIZE 200MAH 1.2V PACK OF 10** £4.00 REF 4P82X, PACK OF 100 £30.00 REF 30P16X

**CB CONVERTORS.** Converts a car radio into an AM CB receiver. Cased with circuit diagram. £4.00 ref 4P48X

## BULL ELECTRONICS

250 PORTLAND ROAD HOVE SUSSEX  
BN3 5QT TELEPHONE 0273 203508

MAIL ORDER TERMS: CASH PO OR CHEQUE  
WITH ORDER PLUS £2.50 POST PLUS VAT.

PLEASE ALLOW 10-14 DAYS FOR DELIVERY

NEXT DAY DELIVERY £8.00

FAX 0273 23077

SOME OF OUR PRODUCTS MAY BE UNLICENSABLE IN THE UK

**FLOPPY DISCS.** Pack of 15 3 1/2" DSDD £10.00 ref 10P88X. Pack of 10 5 1/4" DSDD £5.00 ref 5P168X

**SONIC CONTROLLED MOTOR** One click to start two click to reverse direction. 3 click to stop! £3.00 each ref 3P137X

**FRESNEL MAGNIFYING LENS** 83 x 52mm £1.00 ref 8D827X

**LCD DISPLAY** 4 1/2 digits supplied with connection data £3.00 ref 3P77X or 5 for £10.00 ref 10P78X

**ALARM TRANSMITTERS.** No data available but nicely made complex transmitters 9v operation. £4.00 each ref 4P81X

**100M REEL OF WHITE BELL WIRE** figure 8 pattern ideal for intercom door bells etc. £3.00 a reel ref 3P107X

**TRANSMITTER RECEIVER SYSTEM** Originally made for nurse call systems they consist of a pendant style transmitter and a receiver with telescopic aerial 12v. 80 different channels. £12.00 ref 12P26X

**CLAP LIGHT.** This device turns on a lamp at a finger snap etc. nicely cased with built in battery operated light. Ideal bedside light etc. £4.00 each ref 4P82X

**ELECTRONIC DIPSTICK KIT.** Contains all you need to build an electronic device to give a 10 level liquid indicator. £5.00 (ex case) ref 5P194X

**UNIVERSAL BATTERY CHARGER.** Takes AA's C's D's and PP3 nicads. Holds up to 5 batteries at once. New and cased mains operated. £6.00 ref 6P36X

**ONE THOUSAND CABLE TIES** 175mm x 2.4mm white nylon cable ties only £5.00 ref 5P181X

**PC MODEMS** 1200/75 baud modems designed to plug into a PC complete with manual but no software £18.00 ref 18P12X

**ASTEC SWITCHED MODE POWER SUPPLY** 80mm x 165mm (PCB size) gives +5 at 3.75A, +12 at 1.5A, -12 at 0.4A. Brand new £12.00 ref 12P39X

**VENTILATED CASE FOR ABOVE PSU** with IEC filtered socket and power switch. £5.00 ref 5P190X

**IN CAR POWER SUPPLY.** Plugs into cigar socket and gives 3.4, 5.6, 7.5, 9 and 12v outputs at 800mA. Complete with universal spider plug. £5.00 ref 5P167X

**CUSTOMER RETURNED** switched mode power supplies. Mixed type good for spares or repair. £2.00 each ref 2P292X

**DRILL OPERATED PUMP.** Fits any drill and is self priming. £3.00 ref 3P140X

**POWERFUL SOLAR CELL 1AMP .45 VOLT** only £5.00 ref 5P192X (other sizes available in catalogue)

**SOLAR PROJECT KIT.** Consists of a solar cell, special DC motor, plastic fan and turntables etc plus a 20 page book on solar energy! Price is £8.00 ref 8P51X

**RESISTOR PACK.** 10 x 50 values (500 resistors) all 1/4 watt 2% metal film. £5.00 ref 5P170X

**CAPACITOR PACK 1.** 100 assorted non electrolytic capacitors. £2.00 ref 2P286X

**CAPACITOR PACK 2.** 40 assorted electrolytic capacitors. £2.00 ref 2P287X

**QUICK CUPPA?** 12v immersion heater with lead and cigar lighter plug. £3.00 ref 3P92X

**LED PACK.** 50 red leds, 50 green leds and 50 yellow leds all 5mm. £8.00 ref 8P52X

**FERRARI TESTAROSSA.** A true 2 channel radio controlled car with forward reverse 2 gears plus turbo. Working headlights. £22.00 ref 22P6X

**ULTRASONIC WIRELESS ALARM SYSTEM** Two units, one a sensor which plugs into a 13A socket in the area you wish to protect. The other a central alarm unit plugs into any other socket elsewhere in the building. When the sensor is triggered (by body movement etc) the alarm sounds. Adjustable sensitivity. Price per pair £20.00 ref 20P34X. Additional sensors (max 8 per alarm unit) £11.00 ref 11P6X

**WASHING MACHINE PUMP.** Mains operated new pump. Not self priming. £5.00 ref 5P18X

**IBM PRINTER LEAD.** (025 to centronics plug) 2 metre parallel. £5.00 ref 5P186X

**COPPER CLAD STRIP BOARD** 17" x 4" of 1" pitch "vero" board. £4.00 a sheet ref 4P62X or 2 sheets for £7.00 ref 7P22X

**STRIP BOARD CUTTING TOOL.** £2.00 ref 2P352X

3 1/2" disc drive. 720K capacity made by NEC. £60.00 ref 60P2X

**TV LOUDSPEAKERS.** 5 watt magnetically screened 4 ohm 55 x 125mm. £3.00 a pair ref 3P109X

**SPEAKER GRILLS.** set of 3 matching grills of different diameters. 2 packs for £2.00 (6 grills) ref 2P364X

**50 METRES OF MAINS CABLE** £3.00 2 core black precul in convenient 2 m lengths. Ideal for repairs and projects. ref 3P91X

**4 CORE SCREENED AUDIO CABLE 24 METRES** £2.00. Precut into convenient 1.2 m lengths. Ref 2P365X

**TWEETERS 2 1/4" DIA** 8 ohm mounted on a smart metal plate for easy fixing. £5.00 ref 2P366X

**COMPUTER MICE** Originally made for Future PC's but can be adapted for other machines. Swiss made £8.00 ref 8P57. Atan ST conversion kit £2.00 ref 2P362X

**6 1/2" 20 WATT SPEAKER** Built in tweeter 4 ohm £5.00 ref 5P205X

**5" X 3" 16 OHM SPEAKER** 3 for £1.00 ref CD213X

**ADJUSTABLE SPEAKER BRACKETS** Ideal for mounting speakers on internal or external corners, uneven surfaces etc. 2 for £5.00 ref 5P207X

**PIR LIGHT SWITCH** Replaces a standard light switch in seconds. Light operates when anybody comes within detection range (4m) and stays on for an adjustable time (15 secs to 15 mins). Complete with daylight sensor. Unit also functions as a dimmer switch! 200 watt max. Not suitable for fluorescents. £14.00 ref 14P10X

**2 MEG DISC DRIVES** 3 1/2" disc drives made by Sony housed in a 5 1/4" frame 1.2 meg formatted. £66.00 ref 66P1X

**CUSTOMER RETURNED** 2 channel full function radio controlled cars only. £5.00 ref 8P200X

**WINDUP SOLAR POWERED RADIO!** FM/AM radio takes NICAD batteries complete with hand charger and solar panel. 14P200X

**240 WATT RMS AMP KIT** Stereo 30-0-30 psu required. £40.00 ref 40P200X

**300 WATT RMS MONO AMP KIT** £55.00 psu required ref 55P200X

**ALARM PIR SENSORS** Standard 12v alarm type sensor with inter. face to most alarm panels. £16.00 ref 16P200X

**ALARM PANELS** 2 zone cased keypad entry, entry exit time delay etc. £18.00 ref 18P200X

**35MM CAMERAS** Customer returned units with built in flash and 28mm lens 2 for £8.00 ref 8P200X

**STEAM ENGINE** Standard Mamod 1332 engine with boiler piston etc. £30.00 ref 30P200X





# EXPRESS MAIL

This week *Express's* Editor, Andy Storer, takes over the letters pages and dives straight into the controversy over Amstrad's new games PC, Atari's marketing image, soft porn and that cover disk...



## Sugar's game

With regards to *Are PC games taking over?* in *Express* 149 I would like to make a few points.

You have to remember that the majority of games made for the PC are made in USA. Therefore these games are written for their standard machine. Most of the games are aimed at the minimum 286 machines of at least 12MHz with minimum CGA graphics. As time goes on we are getting more and more to the stage where the majority of new PC games need a 386 machine with VGA graphics.

Here in the UK there are still quite a lot of 8086 type machines being purchased. These can be now bought at quite reasonable prices, but are no good at play many of the PC games on the market because they are too slow. But the 386 machines are out of most people's reach just to play

games on.

In the UK there are few PCs in the home, with an even lower number of 386 machines. Since the majority of game players are home users I cannot see how PC games are taking over.

The machines themselves can be made to be marvellous games machines. You could design great games for 486 SVGA with stereo sound, like the Ad lib card. The top and bottom of it is that the machines are certainly capable of being a serious games machine but the price of them is too high for them to make any serious impact.

Maybe in a few years time if the prices of these fast PCs with VGA, etc, fall enough, then it could be possible for PC games to make a more serious impact on the games market.

Graham Parkin, Gateshead

I TAKE YOUR points Graham, but the figures we published in *Express* 150 tend

to lead us to assume that the PC games sales explosion has already begun.

The point is that the PC is easily the most upgradeable machine on the market – and for that very reason one of the most future-proof of boots. As such it's quite easy to pick up VGA cards for around £100 and thereby transform your PC overnight. And I think this is what's been happening – en masse. Next up it will be cheap 386 upgrades.

Given that there are nearly as many PCs in the home as there are STs and Amigas (about half a million of each), PC games sales will overtake those of both these sooner rather than later.



## Atari's name

Despite what the critics say, Atari has finally got it right. It has realised exactly who it is trying to sell to. It is a fact that most computers are sold by the High Street chains to parents who know nothing about computers.

Put yourself in their position; you walk into Dixons and the sales assistant tells you they have two models on offer:

- 1) The Commodore Amiga which is great for games and comes packaged with 'Yet Another Shoot-'em-up' and 'Massacretron'; or
- 2) The Atari STE packaged with educational software suited to the age of the user.

The only reason parents are buying a computer is on the pretence that the child will use it for 'school work'. The choice from the parents' point of view, is obvious.

On the down side, Atari really needs to get something going on the STE software front. So far it is selling a machine which is superior to the ST, but with

nothing to show for it. Just one really good STE game packaged with the machine would help.

Nial Grimes, Llanelli, Dyfed

I AGREE WITH you Nial that the STE is sadly under-promoted. So far, no games have been released that really show off its capabilities. Which is an inexplicable shame.

However, my spies tell me this is because Atari just won't give out STEs to developers – preferring to encourage work on the Lynx and Falcon console projects instead.

The Amiga has got so far ahead though in new machine sales that I guess a parent would be pretty hard pushed to deny their kid an Amiga this Christmas for fear of appearing mean and miserly.

## Diskcontent?

EDITED HIGHLIGHTS FROM THE NEW TRI-FORMAT COVER-MOUNTED DISK DEBATE.

...Splitting a 750K disk three ways doesn't leave much room for any format.

What fits into 250K these days?

Stewart Russell via Cix

...All that happens is that you get a small bit of code for each machine, which short changes all machine owners. And what of your readers who don't happen to own an Amiga, Atari, or PC?

Dave via Cix



• Re-printed solely in the interests of engendering informed debate, this American ad for the Neo Geo console takes computer marketing to new depths. 24-bit colour copies of this unmitigated filth are available from 'Andy Storer's pension fund', NCE, 30 Monmouth St, Bath BA1 2BW for only £49.99 including post, packaging and magnifying glass.



## Sex sells

British software houses are often accused of sexism in their adverts (with some due cause I must say), but if you thought that the infamous Psycho Pigs USB advert was rock bottom then take a look at this piece of trans-Atlantic doggy doo.

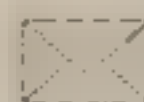
Yet another example of the computer world throwing back the sheets and inviting womankind in for the fun (oor!).

Found in a recent American film mag, it seems that the Yanks

perceive their customers as being male only, furtive self manipulators. It's bad enough that every so often, some shrink or other insinuates that techno freaks are emotionally retarded, without the industry spending lots of dosh confirming that they are right.

Tony Pressley, Worksop, Notts

THANKS FOR THE AD TONY – it certainly takes some beating in the soft porn sales stakes. I wonder what Clare Anthony would make of the particularly furtive pose adopted by the male? Now rip this page out and throw it in the bin!



## Pedant's Point

(strictly not a point but a subset of two-dimensional space)

To throw a crowbar in the wheel of the bicycle of this discussion (don't you just love well-contrived metaphors?), can I point out that infinity could equal 0, or something very much like it? No? Oh Well, I'm going to try.

Suppose you have a very long piece of string – this stretches from an infinite distance away, passes past your eyes, and continues out for an infinite distance. It's an infinite length, OK? Now, producing your trusty WH Smith scissors, you cut it at the point in front of you, so you have two pieces of string, each stretching out to infinity. You throw

one of these away (for the sake of coherence, I'm not going to start talking about where you can throw it). Now, you started with an infinitely long piece of string, you cut off and threw away an infinitely long piece of string, and you still have the same amount left. The only number that you can subtract from itself and still have the original number left is 0. Therefore infinity = 0.

There is almost definitely a flaw in that somewhere, but it's a good enough reason not to serialise Geoff Winkless's calculations over 10 weeks.

Daniel Barlow, The Rectory, Northampton



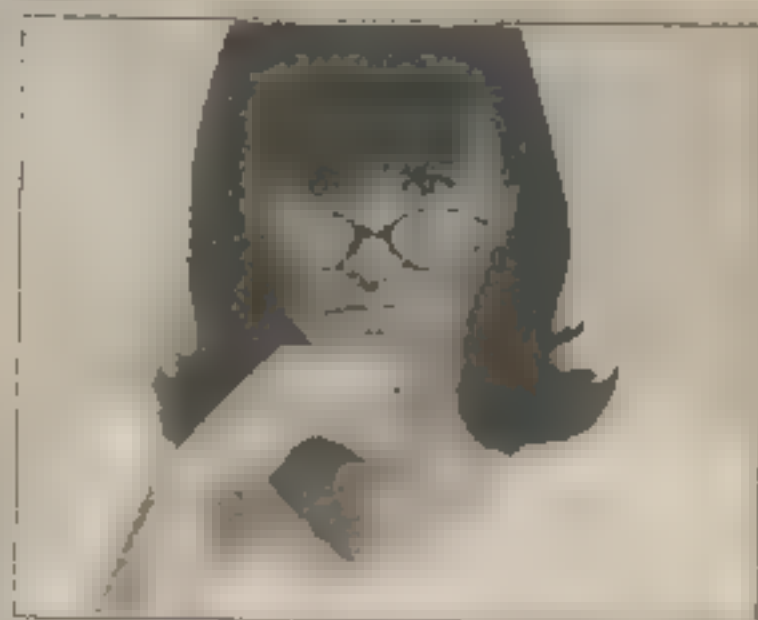
## ON THE COUCH

This week's willing inner realms voyager ready for a spot of pro-active psychological modelling is the one and only MIKE CHITTENDEN of FAVERSHAM. Mike reckoned our resident shrink, Dr Clare Anthony, was his fave software, but scrubbed this bit out. But you could be braver just by sending in the name of the machine you own, your favourite software and the machine you'd most like to own. Put them all in an envelope and send them to Leather Couch Clare, NCE, 30 Monmouth Street, Bath BA1 2BW. Then sit back and wait for stardom. OK Mike - just lie down, think of England and reeeeeeelllllaaaaaaxxxx!

- MACHINE OWNED: Atari ST
- FAVE SOFTWARE: Llamatron and all fractal generators
- DESIRED MACHINE: Atari TT

Dearie, dearie, dearie me. Llamatron, if I remember correctly, is the 'greatest shareware extravaganza ever to appear in recent times'. And it's well weird. Its author, Jeff Minter, requires a whole Leather Couch special session, but for the moment I'll just say this. Jeff - when the deserts freeze over and the camels come skating home I'll be waiting for you with open arms. Holding a shotgun.

Now Mike, these fractal generators, you know what we Freudians say about these don't you? Yes, they're



exceptionally useful in treating advanced schizophrenic delusions. But why should this be?

Well, reality is indeed composed of fractal elements; absolute numbers don't exist in any form other than pure mathematical theory and as such absolute sanity is a misnomer. We are all fractally schizophrenic.

Once you've appreciated this simple truth, all psychological conditions become relative to a misconceived notion of normality. And nutters, like yourself, no longer exist. In fact they merely transpose themselves into their objects of desire. Some people fall in love with and become Napoleon. Some people fall in love with and become an Atari TT. It takes all sorts.

**PROGNOSIS:** Do whatever it takes to get hold of a TT. Then, using a still video camera, import everything you come across into a fractal generator. You will shortly realise, that like Llamatron, everyday reality is endlessly weird, but unlike Llamatron, can't be turned off.

....A better idea would have been ■ give your readers a choice and publish the magazine in two formats - one with the cover disk at £1.50 and the magazine by itself at the old price ■ 88p.

Then everybody would be happy. I am not complaining myself, but I can predict that a ■ of readers will complain.

H D Twiddle, Hull

**NEW COMPUTER EXPRESS R.I.P.** I'll give you two months at the new price and then the demise of another good Weekly Mag.

So long New Computer Express.

Jim North via Aspects

Like the new magazine format, but not the new price. But if we get a free disk every week it might ■ worth it.

The trouble is I'm up to my ears in software. I've got three PASCAL compilers, two assemblers and a MODULA-2 compiler (all shareware) that I haven't even looked ■ yet.

Al Baron via Aspects

Many people read NCE as their 'newspaper' of the computer world and generally like its overview of many different machines and subjects.

There may be a substantial amount of readers who see the addition of a cover disk as an

added attraction, ■ which I am one.

But I am of the opinion that it is getting ■ the stage where you cannot pick up a computer related magazine without a disk or tape of some sort stuck to the cover, and therefore am opposed to this extra.

And NCE as the 'newspaper' of the computing world does not need this additional extra since it adds to the cost of developing, packaging, shipping of the magazine which ■ passed to us, the buyer, as a 70 per cent price increase.

I am not about to cancel my newsagents order in protest as I enjoy reading Express and look forward ■ reading it every week so. Many ■ us readers will continue buying Express just as normal except that it is 62p dearer.

But then again some useful software (or good game) just might be on that disk next week.

Paul Gregg, Co. Antrim

Keep up the good work, the magazine is excellent and the new addition of the cover disk is a great idea and well worth the money, especially for me as I own both an Amiga and PC.

CR May, Manchester

My intention, as Editor, is to use the disk as a means of offering readers the best in PD and shareware along with demos

# TECHNOMANIA

## Commodore Amiga Cartoon Classics Pack

3 Great Games  
Lemmings (Psychosis' Smash Hit)  
The Simpsons versus the Space Mutants  
Captain Planet and the Planeteers  
Also Deluxe Paint III (Electronic Arts Superb Art Package) and Commodore's A501 512K Ram Expansion

£359.99

## Commodore Amiga 1500

1 Megabyte of memory, two 3.5" disk drives and the following software:  
Toki, ELF, Puzznic, Home Accounts and The Works (Integrated word processor, spreadsheet and database)

£659.99

With Philips CM8833 Mk2 Colour Monitor

£889.99

## MONITORS

Commodore 1084S .....£259.99  
Philips CM8833 Mk2 (inc. cable, free copy of F19 and one year on site maintenance) .....£244.99

## PRINTERS.

(all printers include cable)

Citizen 120D+ .....£134.99  
Citizen 124D .....£194.99  
Citizen Swift 9 .....£194.99  
Citizen Swift 24 .....£284.99  
Optional Colour Kit for Swift printers .....£34.99

Seikosha SP1900AI (9 pin Dot Matrix) ..£124.99

Canon BJ10E .....£264.99

Star LC20 .....£154.99  
Star LC200 colour .....£229.99  
Star LC24-200 mono .....£259.99  
Star LC24-200 colour .....£299.99

## ACCESSORIES

Cumana CAX354 External Disk Drive .....£59.99

512K memory upgrade with clock .....£31.99

Squick Replacement Mouse .....£14.99

Naksha Mouse with Operation Stealth .....£26.99

Golden Image Optical Mouse .....£36.99

Commodore A590 20Mb Hard Drive .....£289.99

Dataflyer 500 fitted with 52Mb Hard Drive .....£329.99

Please phone for pricing of 105Mb, 210Mb and 420Mb hard drives.

VXL030 25MHz Accelerator Board for Amiga 500, 1500 & 2000 .....£259.99  
VXL030 40MHz Accelerator Board for Amiga...POA  
Maths-Processor (FPU) upgrades and up to 8Mb of 32 bit memory also available for VXL030.

KCS PC Emulator .....£224.99

Many other products available. Please phone for a price on your specific requirement.

All prices include  
17.5% VAT and  
Next Day Delivery  
on hardware



TECHNOMANIA,  
13 WELLBURN STREET  
DUNDEE, TAYSIDE DD2 2RR.

PHONE: 0382 22323

FAX: 0382 400444



Please allow five working days  
for cheque clearance. Prices are  
subject to change without  
prior notice. Orders received  
by 3pm despatched same day.



of new 'serious' software, utilities and games. I don't see how this can be short-changing anyone. And I think it's worth paying an extra 62p a week for.

I also reckon we can bring you the best cover disk material available on any magazine in 250K of code each week – after all we can always split programs into sections or put out a disk one week that has 500K of Amiga code and only 125K each of ST and PC programs.

But ■ be truly successful, the cover

disk relies on software publishers across the board perceiving it ■ be a worthwhile medium – one that is both visible and viable. We reckon we're doing ■ good job of convincing them – but of course these things take time.

So, I hope the disk will take off as a 'news device' and not a dump for non-

sellers. Express has always been a news magazine and I want the disk to reflect that. And you can help ■ in this by suggesting the kind of material you'd like ■ see on the disk each week.

I'd like to see commercial demos, graphics animations, clip art, tutorials, databases and screenshots to go with

reviews. But what do you want to see?

Just write in to 'Yo! Pace', NCE, 30 Monmouth St, Bath BA12BW and I'll send you a tenner for the best ideas.

Meanwhile, we'll continue to do what we do best – bring you the hottest news just as soon as it's announced. Cover disk or not, we won't be changing that! ■

### Write Now

Write and tell Andy Storey what you think! Reach him at: Express Mail, 30 Monmouth Street, Bath BA1 2BW. Sorry, no personal replies, even with an SAE! Only SOME letters will be published.

### On-line mail

Own a modem? Then squint us a letter! Express has its own area on Aspects bulletin board (061 792 0260) where you can leave mail and upload/download files.

We also have our own conference on CIX. Give this on-line service a ring on 081-390 1244 and talk to us direct! You can also leave E-mail for us on Prestel and Micronet @ 011112623 or on Telecom Gold @ 8411x152.

## WANTED!

### Your honest opinion of EXPRESS

■ To help us keep improving your favourite magazine, please fill ■ and return this form

#### 1. How did you buy this issue?

- ☐ I subscribe  
☐ Newsagent delivered it to my home  
☐ Asked newsagent to reserve copy  
☐ Bought it on planned shop visit  
☐ Just happened to see it and liked it

#### 2. Rate NEW COMPUTER EXPRESS in terms of value for money:

- ☐ Excellent! ☐ Good  
☐ Reasonable ☐ Poor ☐ Ripoff!

#### 3. Out of ten, how much did this week's cover make you want to look inside?...../10

#### 4. How much does this issue appeal to you overall?...../10

#### 5. How does it compare with previous issues you've seen?

- ☐ Much better! ☐ Slightly better  
☐ About the same standard  
☐ Slightly worse ☐ Much worse!

#### 6. Rate out of ten this and any other computer magazines you read regularly:

NEW COMPUTER EXPRESS...../10

...../10

#### 7. Out of ten, how useful did you find this week's main feature?

...../10

#### 8. What do you like most and then least about this issue?

I most like .....

And I least like .....

Your name and address:\*

\* Leave blank if you wish – but we may want to send you details of exclusive special offers

● No stamp needed if posted ■ UK.  
 Return to: NCE, Issue 152 Survey, Future Publishing, Freepost, Bath, Avon BA1 2XF.

# Clocktower 081 341 9023

84a Weston Park, Crouch End, London, N8 9PP

Callers welcome, but please phone first

Mail order service available

## MACINTOSH & APPLE II

ENHANCEMENTS - HARDWARE - SOFTWARE NEW

AND USED REPAIR SERVICE AVAILABLE

APPLIED ENGINEERING AUTHORISED DEALER

IGS products

Memory

Drives

Blueprint

Toners

Ribbons

Accelerators

Modems

Monitors

Printers

Syquest

& cartridges

TimeOut

Beagle Bros

Batteries

Zig Chips

Cirtech

Free Tools As

Prosel 16 & 8

Fax Machines

Paper

Power supplies

Spares

Deskjet supplies



# ATARI

# PRINTERS

# AMIGA

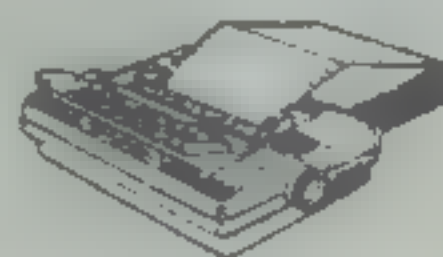
SM124 Mono Monitor	£139.00
External 3.5" Disk Drive	£69.00
Golden Image Hand Scanner	£169.00
Forget-Me-Click II	£19.95
ST Monitor Switch Box	£15.99
STE Stereo scart lead	£12.99
STFM scart lead	£12.99
STE Stereo MKII 8833 lead	£12.99
STFM MKII 8833 lead	£12.99
Joystick/Mouse extension lead	£4.99
Replacement Mouse lead	£3.95
Mouse Mat	£3.50
Squick replacement mouse	£14.99

## ACCESSORIES & RIBBONS

All of our printers come with a parallel cable to suit Atari ST, Amiga and all standard PC etc (other cables available at extra cost - ask for details). All printers carry a full 12 months warranty. We only sell genuine UK stock - we do not offer inferior "grey imports". Phone for prices on ribbons and accessories for the printers listed below.

## CITIZEN

• 2 YEAR WARRANTY •



**COLOUR KIT SPECIAL OFFER!** Our FREE colour kit offer with all Citizen Swift 9, 24 and 24X printers will continue only while stocks last. So hurry and order today to get your FREE colour kit worth nearly £ 40.00.

**PRINTER BUYERS SPECIAL OFFER!** We are offering to all buyers of Citizen printers, the chance to purchase a CITIZEN PRINTER STARTER PACK. The pack comprises of: 3.5" disk full of printer drivers for the ST, Amiga & PC; 200 sheets of fanfold tractor feed paper, 200 fanfold tractor feed address labels; 5 tractor feed envelopes all for only £12.99 extra.

Citizen 120D (9-pin, 144 cps draft, 30 cps NLO)	£139.00
* Citizen Swift 9 (9-pin, 192 cps draft, 48 cps NLO)	£199.00
Citizen 124D (24-pin, 144 cps draft, 48 cps LQ)	£209.00
* Citizen Swift 24 (24-pin, 192 cps draft, 64 cps LQ)	£299.00
* Citizen Swift 24X (24-pin, 15" carriage)	£399.00

\* Denotes FREE COLOUR UPGRADE KIT

## Other Printers ....

## Star

Star LC200 Colour (9-pin, 180 cps draft, 45 cps NLO)	£220.00
Star LC24-10 Mono (24-pin, 180 cps draft, 60 cps LQ)	£215.00
Star LC24-200 Mono (24-pin, 200 cps draft, 67 cps LQ)	£280.00
Star LC24-200 Colour (24-pin, 200 cps draft, 67 cps LQ)	£295.00
Canon BJ10E Bubble Jet (ink jet, portable and compact)	£289.00
Hewlett Packard DeskJet 500 (ink jet, 3 pages per minute)	£399.00

## HP PAINTJET

- Colour Inkjet Printer
- upto 180 DPI full colour printing
- Colour & black cartridges supplied
- Friction & tractor feed
- ST, Amiga & PC compatible
- Plain paper + transparency supplied
- Parallel or RS232 interface
- Parallel lead supplied FREE

"EXCELLENT" rating  
from ST User October 91

£ 785.00  
NET

# ATARI LYNX

The Atari Lynx is a superb, full colour, hand held, games console using plug-in cartridge games. The Lynx can be used with either batteries or a mains power supply unit. All our Lynx machines come with instructions and are available with or without mains power supply unit and comlynx cable.

Lynx Console Only	£79.99
Lynx + PSU	£84.99
Lynx + PSU + Comlynx	£89.99

Carrying Case	£14.99
Carrying Pouch	£11.99
Car Power Adaptor	£9.50
Sun Visor/Scratch Shield	£6.99
Mains Power Supply	£14.99
Comlynx Cable	£7.99

## GAME CARDS

Chips Challenge	£19.99
Electrocop	£19.99
Gates of Zendocon	£19.99
Klax	£19.99
Miss Pacman	£19.99
Rampage	£19.99
Road Blasters	£19.99
Robo Squash	£19.99
Shanghai	£19.99
Sime World	£19.99
Xenophobe	£19.99
Zarlor Mercenary	£19.99
Gauntlet 3	£23.99
Blue Lightning	£23.99
Rygar	£23.99
Ninja Gaiden *NEW*	£23.99
War Birds	£23.99
Paperboy	£23.99
California Games	£23.99
Pacland *NEW*	£23.99
Block Out	£23.99
A.P.B. *NEW*	£23.99
Ultimate Chess	£27.99

Protar 512K ram upgrade + clock	£29.99
A501 512K ram upgrade + clock	£29.99
A500 15Mb ram upgrade	£99.99
A590 20Mb hard disk drive	£284.95
External 3.5" Disk Drive	£65.00
Squick replacement mouse	£14.99
Golden Image Hand Scanner	£169.00
Amiga Stereo Scart Lead	£12.99
Amiga 8833 MkII Lead	£12.99
Mouse Mat	£3.50

We are proud to announce that we have further stocks of the genuine Commodore A501 512K Ram Expansion, which we are now offering at the even better, ultra low price of:

## NEW LOW PRICE

A501 512K Ram with clock	£29.99
--------------------------	--------

At last high quality hard disk drives for the Amiga A500. The new PROTAR range of A500 hard disks are destined to become THE hard disk drive for the Amiga A500. These high quality hard disks are available in sizes ranging from 20MB to 160MB ... and just look at the specifications ...

- Perfect fitting to the A500
- Colour matched to the A500
- 5 times faster than the A590
- 1MB, 2MB, 4MB or 8MB internal ram expansion facility
- 1 year REPLACEMENT warranty
- 2 year warranty of Cache versions
- Auto parking & auto booting
- Ultra low power consumption from A500's own PSU
- Sub 24 millisecond access time
- Hard disk management software
- Separate PSU available when ram expansion is fitted
- High quality - made in Germany

Protar 20Mb Hard Disk	£279.00
Protar 30Mb Hard Disk	£349.00
Protar 50Mb Hard Disk	£429.00
Protar 50Mb with Cache	£529.00
Protar 60Mb Hard Disk	£542.00
Protar 80Mb Hard Disk	£599.00
Protar 100Mb with Cache	£639.00
Protar 160Mb with Cache	£939.00

Ram expansions for all Amiga Protar hard disk drives:

Protar 1MB internal ram	£58.00
Protar 2MB internal ram	£115.00
Protar 4MB internal ram	£245.00
Protar 8MB internal ram	£490.00
PSU for when ram fitted	£34.00

We have limited stocks of the software pack which comes with the A500 Cartoon Classics. We are offering this excellent pack at the very low price of only £49.99. This is what you get:

- \* Deluxe Paint 3
- \* The Simpsons
- \* Captain Planet
- \* Lemmings

only  
**£49.99**  
inclusive

# ATARI

## ST HARDWARE

We are official stockists of the latest in high quality / low price ST hard disk drives from Protar. All Protar hard disk drives come with a full 12 month REPLACEMENT warranty (no lengthy repairs!), a DMA through port, device number switching and superb disk management software.

## \* ST FORMAT GOLD AWARD WINNER \*

## \* RATED AS "EXCELLENT" BY ST USER MAGAZINE \*

## \* STE COMPATIBLE \*

Progate 20Mb Hard Disk	£279.00
Progate 40Mb Hard Disk	£341.00
Progate 40Mb with Cache	£423.00
Progate 44Mb Removable	£611.00
Progate 60Mb Hard Disk	£437.00
Progate 60Mb Tape Streamer	£581.00
Progate 80Mb Hard Disk	£488.00
Progate 80Mb with Cache	£585.00
Progate 150Mb Tape Streamer	£793.00
Progate 160Mb with Cache	£922.00
Progate 440Mb with Cache	£1588.00

DIY 1 - 512k upgrade	£22.99
DIY 2 - 2mb upgrade	£89.00
DIY 4 - 4mb upgrade	£159.00

All STE Ram Kits come with instructions and DO NOT require soldering in most machines.

# COLOUR MONITORS

## PROTAR VISTO C14M

- \* Colour 14 inch monitor
- \* Stereo speakers
- \* 600 x 285 pixel resolution
- \* Improved version of Philips 8833 Mk2
- \* Green screen switch
- \* Free with STE, STFM or Amiga lead
- \* 12 months REPLACEMENT warranty

only **£ 239.99**

## PHILIPS 8833 MK2

Philips 8833 Mk 2 also stocked complete with STE, STFM or Amiga cable and 12 months free on-site warranty.

only **£249.99**



# ATARI STE PACKS

ALL ATARI STE PRICES INCLUDE VAT AND UK DELIVERY. ALL PRODUCTS CARRY A FULL 12 MONTH WARRANTY. PLEASE RING US BEFORE ORDERING TO CHECK STOCKS AND CURRENT PRICES.

**ATARI STE STANDARD PACK.** consists of the computer with mouse, tv lead, manual and all connecting leads etc. The Standard Pack is supplied with NO software.

**ATARI STE DISCOVERY 1.** consists of the Standard Pack and STOS, First Basic, NeoChrome and 4 games (Carrier Command, Space Harrier, Outrun, Bomb Jack)

**ATARI STE DISCOVERY 2.** consists of the Standard Pack and First Basic, ST Tour, NeoChrome and 4 games (Dragons Breath, Super Cycle, Indiana Jones, Anarchy)

**ATARI STE TURBO.** consists of Standard Pack and STOS, Hyperpaint II, Music Maker II, First Basic and 8 games (Indiana Jones, Dragons Breath, Blood Money, Impossible Mission II, HKM, Anarchy, Outrun and Supercycle)

**ATARI STE TENSTAR.** consists of Standard Pack and Asterix, Chess Player 2150, Drivin Force, Live • Let Die, Onslaught, Pipemania, Rick Dangerous, Rock n Roll, Skweek and Trivial Pursuit II

**ATARI STE POWER.** consists of Standard Pack and also 20 top selling arcade games. Due to lack of space, it is not possible to list the games. Please phone for details.

**ATARI STE KUMA BUSINESS.** consists of Standard Pack and word processor K-Word 2 (incl K Spell Checker), K-Data database, K-Spreadsheet, K-Graph business graphics and Metacomco Basic Language.

**ATARI STE CURRICULUM.** consists of Standard Pack and also 3 levels of educational software (from 5 yrs to 50 yrs !!), a word processor, a spreadsheet, a database, HyperPaint and Music Maker II software.

512k	1mb	2mb	4mb
£289.00	£319.00	£349.00	£429.00
£299.00	£329.00	£359.00	£439.00
£299.00	£329.00	£359.00	£439.00
£309.00	£339.00	£369.00	£449.00
£309.00	£339.00	£369.00	£449.00
£309.00	£339.00	£369.00	£449.00
£319.00	£349.00	£379.00	£459.00
X N/A	£369.00	£399.00	£479.00

# AMIGA PACKS

ALL AMIGA PRICES INCLUDE VAT AND UK DELIVERY. ALL PRODUCTS ARE UK STOCK AND CARRY A FULL 12 MONTH COMMODORE WARRANTY. PLEASE RING US BEFORE ORDERING TO CHECK STOCKS AND CURRENT PRICES.



**ALL OF OUR 1MB A500 PACKS NOW COME WITH THE GENUINE COMMODORE A501 RAM EXPANSION WITH BUILT IN CLOCK.**

**AMIGA A500 BASE** A500 computer, mouse, tv modulator, manuals, Workbench software, all connecting leads etc. The A500 Base Packs are supplied 'bare' with no games software. **£299.00**

**AMIGA A500 BASE 1MB** A500 computer supplied with genuine Commodore A501 512K ram expansion, mouse, tv modulator, manuals, Workbench software, etc supplied 'bare' with no games software. **£325.00**

**AMIGA A500 ASTRA** A500 512k computer, mouse, tv modulator, manuals, Workbench, etc supplied with 10 great software titles (see A500 1MB ASTRA pack below for details) **£325.00**

**AMIGA A500 1MB ASTRA** Amiga A500 computer, A501 512K Ram expansion with clock and battery back-up, mouse, tv modulator, manuals, Workbench etc disks, plus the ASTRA 10 games pack including the following games: Datastorm, Dungeon Quest, E Motion, Grand Monster Slam, Kid Gloves, Powerplay, RVF Honda, Shuffle Puck Cafe, Soccer and Tower of Babel **£350.00**

**AMIGA A500 1MB CARTOON CLASSICS** Amiga A500 computer, A501 512K Ram expansion with clock and battery back-up, mouse, tv modulator, manuals, Workbench etc disks, plus the following top selling software titles: Lemmings, The Simpsons, Captain Planet and Deluxe Paint 3 **£359.00**

**AMIGA A1500 BASE** A1500 computer with 1MB ram, detachable keyboard, 2 x 3.5" 880k disk drives built in, mouse and all manuals. The Amiga A1500 accepts A2000 peripherals. The A1500 base pack is supplied with no software. Please note that the A1500 does NOT have a modulator. **£599.00**

**AMIGA A1500 SOFTWARE** consists of A1500 base pack and the following software: Platinum Works, Deluxe Paint Version 3, Populous, Simm City, Battle Chess, Their Finest Hour (Battle of Britain) and 2 books **£655.00**

IF YOU WISH TO ORDER WITH US, THEN PLEASE SEND YOUR CHEQUES, BANKERS DRAFTS, POSTAL ORDERS, CASH ETC TO OUR MAIL ORDER ADDRESS (PLEASE MAKE CHEQUES PAYABLE TO BEST PRICES) OR RING OUR MAIL ORDER HOTLINE ANY TIME BETWEEN 10.00AM AND 12 MIDNIGHT, 7 DAYS A WEEK, AND USE YOUR ACCESS OR VISA CARDS OR ALTERNATIVELY PAY A VISIT TO OUR SHOP, CHIPS COMPUTER CENTRE, AND SEE OUR WIDE RANGE OF COMPUTER GOODS AND SOFTWARE.

**VISIT OUR SHOWROOM**  
**CHIPS COMPUTER CENTRE, 53 RUGBY ROAD,**  
**WORTHING, WEST SUSSEX BN11 5NB.**

**TEL: (0900) 700804**

OPENING: MON TO FRI 10AM TO 6PM, SAT 9.30AM TO 5.30PM

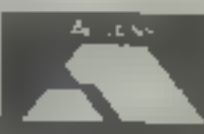
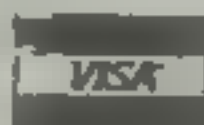
FINANCE / CREDIT FACILITIES (SHOP ONLY)

PART EXCHANGE CONSIDERED (SHOP ONLY)

NEW AND USED ST, AMIGA & PC EQUIPMENT ON DISPLAY

ALL TYPES OF SOFTWARE (BUSINESS / LEISURE / EDUCATIONAL)

REPAIRS UNDERTAKEN TRAINING INSTALLATION ON-SITE WARRANTIES



## MAIL ORDER ONLY

**BEST PRICES (DEPT NCE), 53 RUGBY ROAD,**  
**WORTHING, WEST SUSSEX BN11 5NB.**

**TEL: (0900) 700711**

OPENING: 7 DAYS A WEEK 10AM TO 12 MIDNIGHT

ALL PRICES INCLUDE 17.5% VAT AND FREE DELIVERY (AVERAGE 4 - 11 DAYS)

PLEASE ADD £7.00 FOR NEXT WEEKDAY DELIVERY

GOODS USUALLY SENT OUT THE SAME DAY WHEN

CLEARED PAYMENT IS RECEIVED BEFORE 2PM

PERSONAL CHEQUES REQUIRE 7 DAY CLEARANCE

All prices include 17.5% VAT and free UK delivery unless stated otherwise. All prices / specifications / special offers subject to change without notice.



# MACHINE SPECIFICS

## MACINTOSH

- Apple joins leading anti-piracy association
- First UK-manufactured Mac clone hits the market
- Where to get the weirdest CD-ROMs imaginable

### APPLETALK

Apple US has recently joined the Software Publishers Association (SPA) Copyright Protection Fund. This is a fund which pays for software manufacturers to take legal action against companies which pirate their software. Companies like Claris, Lotus, Microsoft and WordPerfect are already members of the Fund, but it's taken Apple some time to make the decision to join. According to on-line information service NewsBytes, Apple will sponsor a number of anti-piracy projects, including the translation and duplication of French and Spanish versions of the SPA video.

Apple has announced that it will build a new Apple USA Customer Support Centre in Austin, Texas. The site should house over 300 workers by the end of next year, and will contain some of Apple's service and technical support divisions. However, the decision isn't final yet: Apple will only finally agree on the site if Austin City Council and the City Commissioners Court grant the company some tax concessions.

### FREE SOFTWARE

Callhaven has announced a special, limited time deal: if you buy any of a range of software which includes Norton

Utilities for the Macintosh, GreatWorks, any of Symantec's programming languages (Think C or Think Pascal), you will get a copy of *More II* (an outliner/personal productivity program) or Symantec Utilities for the Macintosh (SUM) free of charge. Sounds like a good deal to me - it's certainly worth checking Symantec's prices out if you want one of the specified programs and wouldn't mind a freebie too.

☎ Call the company on 071-410 9191.

Callhaven is also participating in something which it calls Apple's 'Bring out your dead' offer for educational users: trade in any old computer you

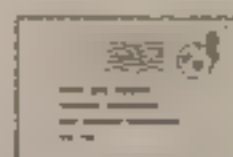
have - from a broken ZX80 to a VAX mainframe - and you'll get £150 off the price of an LC 4/40 or 4/80. And the company is combining this offer with its own already reasonably-priced education deals, so if you qualify you should at least get on the phone and find out more.

### UK MAC CLONE

BlueMAQ, a UK company, has announced the launch of a 100 per cent Apple Macintosh-compatible computer which is manufactured in this country.

The BlueMAQ Hs II (catchy name) has, according to the company, been,

## POSTCARD FROM AMERICA



One of the themes wildly promoted at the last Boston MacWorld Expo was the Space Shuttle Atlantis. This was not a spontaneous reaction to the space program, although everyone I know is wild about the *Star Trek: Next Generation* show, but an attempt to ride on the public relations mouse-tail of the Mac Portable carried onboard.

The Mac was used for a number of things. They tested different cursor control devices that will be used in future missions and perhaps on a space station. The astronauts would send and receive electronic mail using the AppleLink software and network. The computer was also used to record other medical test results, and mission notes. MacSpOC (Shuttle Portable Computer) was an application that provided a real-time display of the shuttle's orbital position against a world map along with day and night cycles, tracking stations, and emergency re-entry information. For all the dough that the space shuttle costs, you'd think that it would come with this feature built-

in. I bet it comes with a cheap AM/FM radio, and no cassette deck.

The portable had to be modified for the trip into orbit. For some reason it was fitted with a special fuse to prevent accidental turn-on during ascent - perhaps they didn't bring a spare set of batteries? The trackball had to be modified so that the ball wouldn't float out of its socket in zero gravity.

The very first e-mail message from space doesn't have quite the emotional resonance of Neil Armstrong's words as he hit the lunar dust. "Hello Earth! Greetings from the STS-43 Crew. This is the first AppleLink from space. Having a GREAT time, wish you were here... send cryo, and RCS! Have a nice day... Hasta la vista, baby... we'll be back!"

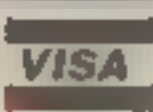
Translated into the vernacular, cryo means cryogenics, fuel for life support and air, while RCS is Reaction Control System, fuel for maneuvering/control. It's the old wire-home-for-more-cash routine!

David Morgenstern

## FEED YOUR ST!



### MEMORY UPGRADES



#### HCS STE MEMORY UPGRADE KITS

STE kits come as either SIMM or SIP type modules. SIMM modules have edge connectors, SIP have pins. All types plug into 4 sockets under the top of the case. SIMM are the most common and are supplied by default, these will be swapped if necessary. Trade in is paid as a refund after you have upgraded your computer. All kits come C/W illustrated instructions. 2+4 Mb come C/W FREE multitasking software.

STE KITS	NORMAL PRICE	WITH 512K TRADE IN	WITH 1024K TRADE IN
512K TO 1024K	£22.00	-	-
2 MEGABYTE	£80.00	£70.00	£60.00
4 MEGABYTE	£150.00	£140.00	£130.00

#### STF(M) MEMORY UPGRADE KITS

There are two basic types of upgrade. The low cost solder-in type which comes complete with sockets, capacitors, resistors and instructions, or, the much easier to install Xtroram Deluxe Kit which fits inside the computer to allow upgrading to 4Mb using simms like the STE uses.

Solder-in upgrade kit to 1Mb.....	£30.00
Xtroram Deluxe Quality SIMM UPGRADING SYSTEM	
Populated to 1Mb.....	£65.00
Populated to 2Mb.....	£110.00
Populated to 4Mb.....	£159.00
Fitting for above (exclusive post).....	£20.00

#### CHIPS

16 x 256K x 1 Dram Chips.....	£24.00
16 x 1Mb x 1 Dram Chips.....	£70.00

### HCS Computer Peripheral Supplies

2 year guarantee on memory!  
11 day money back guarantee!

#### PC EMULATORS

PC Emulators sit on top of the microprocessor of the ST. When in use, they take over control of the processor. This allows Speed and a high degree of compatibility. PC Speed runs 4 times faster than a PC. The AT Speed 8.3 times. The AT Speed co-processor socket allows the extra chip to accelerate numerical calculations 5000% (five thousand!)

AT SPEED	SUPPLIED	£220.00	FITTED	£245.00
PC SPEED	SUPPLIED	£90.00	FITTED	£120.00
AT SPEED STE ADAPTOR	SUPPLIED	£25.00		

#### MACINTOSH EMULATORS

Spectre GCR allows the ST to emulate the MAC using the ST's own processor (as used in the Macintosh). It simply plugs into the cartridge slot and the disk drive port. (It also has a through port to allow a second drive). It will run up to system 6. The version supplied will be the most up to date, supplied by GADGETS.

SPECTRE GCR	SUPPLIED	£250.00
128K ROMS	SUPPLIED	£70.00

#### DISK DRIVES

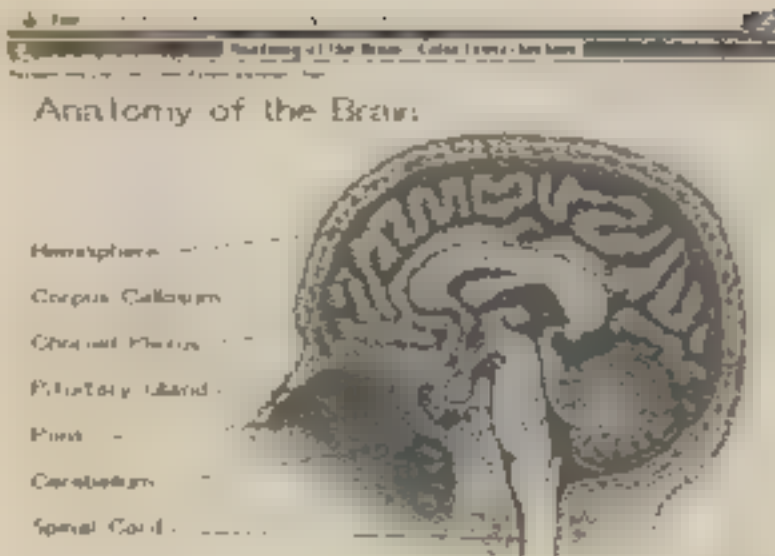
The double sided disk drive kit replaces the internal single sided drive in the STF. The PROTAR hard drives supplied are of the highest quality and are ST Format GOLD winners of 1991.

DOUBLE SIDED DISK DRIVE UPGRADE.....	£47.00
40MB PROTAR HARD DRIVE.....	£335.00
80MB PROTAR HARD DRIVE.....	£485.00

### HOW TO ORDER

PRICES INCLUDE VAT  
Telephone orders and enquiries welcome on Tel/Fax 081 777 0751. Please make cheques/P.O.'s payable to:  
**HCS, 35 HARTLAND WAY, SHIRLEY, CROYDON CR0 8RJ**  
Goods normally despatched within 2 days of receipt. Trade-in paid as a refund E & OE





• Just one of the colour images from *The Family Doctor*, part of a vast range of CD-ROMs sold by KimTec UK.

"specifically designed to match the needs and requirements of the 'power users' within the Mac community."

The Hs II is said to be the first of a complete range of Mac compatibles and peripherals to be manufactured in the United Kingdom.

The Hs II is built around the 68030 processor, running at 25MHz, and comes with an 85Mb hard disk, 4Mb of RAM and a 15-inch grey scale monitor. It will cost £3,995.

According to BlueMAQ, "The Hs II gives enhanced Mac IIx performance by using a proprietary adaptation of genuine Apple motherboards and ROMs."

For more details, phone BlueMAQ on 091-461 0336.

## CD-ROMS GALORE

The latest edition of KimTec UK's KimStacks catalogue thudded through

the door the other day. This catalogue has been appearing at regular intervals for two years now, and is packed full of Macintosh- and PC-compatible CD-ROMs. The catalogue is presented more like a newsletter, with an editorial from Kim, the MD, and an article on how to install a CD-ROM drive on both the Mac and the PC. (Actually, that makes interesting reading in itself - one paragraph on how to do it on the Mac, the rest of the page for the PC!)

As well as 'standard' CD-ROMs such as PD and shareware collections, KimTec always seems to manage to find some of the most incredible CD-ROMs you've ever heard of. How about, for instance:

• *Officer's Bookcase*, a CD-ROM which contains thousands of NATO and Soviet military terms and acronyms, and which is designed for US Desk Officers of foreign command posts? Yours for only £95.

• *Terrorist Group Profiles* - full of information on some of the nastiest groups of people in the world, and a mere £49.50.

• For the medical among you, *Renal Tumours of Children*, which contains "nearly 250 full colour images" - how nice.

KimTec also sells CD-ROM players and other assorted hardware, as well as some floppy-disk based games and utilities. If you have - or are thinking of getting - a CD-ROM player, I'd strongly recommend that you give KimTec a call on 0202 888873 and ask to be put on the mailing list.

Ian Wrigley

## CPC

- All the golf you could ever wish for in *Multimixx 1*
- How to cheat at *Narc*, *Loopz* and *Hero Quest*
- Ubi Soft gains air/sea *Supremacy* in Xmas battle

## PRINTS CHARMING!

It's pretty difficult to get excited about printers. I mean, you rather take them for granted, don't you?

Well you do until you need to buy one, and it's then you have to get into all this stuff about cps, NLQ, Epson emulation, dpi, pl1 leads and what-have-you...

So if you're in the market for a new printer, make sure you take a look at the Fujitsu DL900 24-pin job. (I should be an ad copywriter!)

Seriously, though, this machine is really good. For a start, it's tall rather than deep, which means it's desktop footprint is really quite small. That footprint is all the more amazing when you find out that it accepts A4 paper sideways. In other words, it's a wide-carriage printer. (Most wide-carriage machines tend to be about the size of a dinner table.)

Print quality is excellent - as you'd expect from a 24-pin printer - but the Fujitsu is also pretty fast, at 180 characters per second (so that's what

cps stands for) in draft mode and 60cps in NLQ (Near Letter Quality, gwtting good at this aren't I?), and it's quite quiet during operation too.

The best news of all, though, is the price - a shade under £300. Shop around a bit and you should be able to get it for less than that.


24-pin printers do seem to be getting really affordable these days. The Fujitsu is the best I've seen yet at that price. If you can't find a machine down at your local dealers, you can call Fujitsu on 081 573 4444.

## MULTIMIXX 1

Codemasters started it all, turning out four-game budget-priced compilations under the Quattro banner, and now Kixx, US Gold's budget label, is getting in on the act with the *Multimixx* series.

With the *Multimixx* compilations, though, you don't get four games - you only get three. Still, with each *Multimixx* costing £4.99, that's still a mere £1.66

Continued on next page >



## For the best in Educational Software

Subjects	
☞	French, Spanish
☞	German, Italian
☞	Science, History
☞	Geography
☞	English Words
☞	Spelling
☞	Arithmetic
☞	Football, Sport
☞	First Aid
☞	General Knowledge
☞	England, Scotland
☞	Natural History


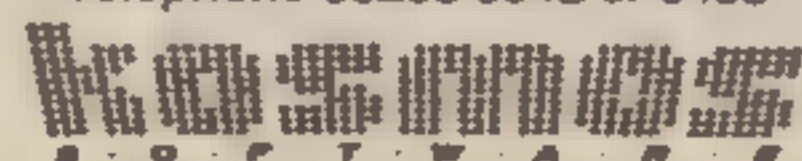

**Kosmos are specialist producers of Educational Software designed to help you enjoy learning from your computer. Versions are available for most popular home & business computers. Many of our programs even allow you to add your own lesson material.**

↓

**Write or telephone for a FREE 20-page BROCHURE of our Educational & Leisure software**

Please state your computer type

Kosmos Software Ltd, FREEPOST (no stamp needed in UK)  
DUNSTABLE, Beds. LU5 6BR  
Telephone 05255 3942 or 5406

## CASTLESOFT

**Prices include VAT and Delivery**

### P.C'S

286 SVGA 40Mb HD 3: Disk, Mouse .....only £699!

386 SVGA 40Mb HD 3: Disk, Mouse .....only £820!

### AMIGA

Commodore Amiga .....only £310!

1 Meg Amiga .....only £325!

1 Meg And 10 Games .....only £345!

Amiga Cartoon Classics Xtra .....only £390!

Amiga 1500 (inc £395 worth of software) .....only £650!

**FED UP WITH A STICKY - OUT MODULATOR? TRY OUR COLOUR MONITOR/TV (with SCART lead).....only £179!**

suitable for ST and Amiga

### ATARI STE

**STE Discovery** (with ST Basic, 1st Basic, 1st Word, ST Tour Super Cycle, Anarchy, Starwrek, Dragon's Breath, Indiana Jones, Neochrome, Hotel Accommodation, Joystick, etc) **only £299!**

**STE Discovery Xtra** (as above, with Art Tutor, Asterix, Trivial Pursuit, Pipe Mania, Live & Let Die, Onslaught, Driving Force, Rock & Roll, Rick Dangerous, Squeak, Chess Player) **Only £325!**

**AMIGA/ST GAMES (ring for details) from only £5!**

**JOYSTICKS.....ONLY £5!**


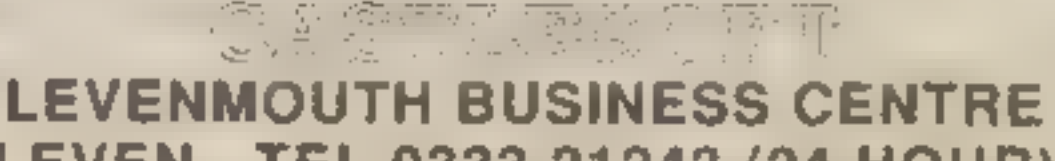

**QUALIFIED STAFF: HELPLINE: REPAIR SERVICE**

**FREE LOCAL DELIVERY AND INSTALLATION**

**BEST VALUE IN U.K.!**

**CASTLESOFT**

**LEVENMOUTH BUSINESS CENTRE**  
**LEVEN. TEL 0333 21243 (24 HOUR)**  
**CALLERS WELCOME**





**This is your chance to pick up an *INCREDIBLE* deal on Amstrad 2000 series computers with VGA Displays!**

**Plus! Free with all Colour Models:  
TOP 10 SOLID GOLD GAMES!**

**Full specification**  
Amstrad 2086 models,  
featuring 640K RAM, with  
MS-DOS 3.3, mouse and  
all manuals supplied.

**Prices indicated**  
within brackets are  
excluding VAT.

**Full specification PC2286 & PC2385 models including MS-DOS 4.01, mouse and all manuals. All Colour Models are shipped with Hi-Res Colour monitors (0.29mm dot pitch). 2285 features 12MHz 80286 & 1Mb RAM. 2385 has 20MHz 80386 & 4Mb RAM.**

	PC2286 HD40	PC2386 HD65
VGA MONO	(509.78) <b>599.00</b>	(899.00) <b>1056.32</b>
VGA HI-RES COLOUR	(594.89) <b>699.00</b>	(999.00) <b>1173.82</b>

**'286 VGA  
COLOUR FOR  
ONLY £699** inc VAT

***Tell your friends - tell the world - but move quickly; once we sell out you may never see such value again!***

2286 RAM Upgrade to 4Mb	£ 160.00	2286 Maths Co-Processor	£ 75.20	External 5.25" Drive (360K) for all models	£ 49.95
2086 Maths Co-Processor	£ 99.00	2386 Maths Co-Processor	£ 190.35	External 5.25" Drive (1.2Mb) for 2286 & 2386 models	£ 89.95

Kickstart 1.3 upgrade available from us for only £29.95

GOODS CONDITION: *N* = New *S* = Shop Soiled

Afriar PC4 Dual Media & 65Mb VGA 286 with VGA Colour Monitor	£629	S
Amstrad PC1386 HD90 with 14" HRCD VGA Colour Monitor	£999	N
Amstrad PC2286 DD with Mono Monitor & 1 year on-site warranty	£449	S
Amstrad PC1640 HD20 with Colour Monitor	£349	S
PC-Compatible Monochrome Monitors	£ 60	S
Philips CM8852 Colour Monitor (with ST or Amiga cable)	£219	S
Philips CM8833 Colour Monitor (with ST or Amiga cable)	£189	S
Samsung MCH4335 VGA Colour Monitor	£225	S
Olivetti CWP-1 Complete Wordprocessing System	£269	N
9-Pin Printers (Mono & Colour)	from £50 to £120	S
24-Pin Printers (Mono & Colour)	from £125 to £240	S
Accounts Master (Accounting) (Dual Media)	£19.99	N
Paymaster (Payroll) (Dual Media)	£14.99	N
Infomaster (Database) (Dual Media)	£14.99	N
Supercalc 3.21 (Spreadsheets) (Dual Media)	£19.99	N

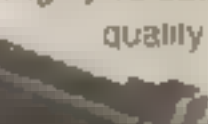
Very quiet • Slimline design • Cooling Vents • Sleek, high quality metal casing • Suits any Amiga or Atari ST • Full 1Mb Unformatted Capacity • Quality Sony / Citizen Drive Mechanism • Convenient On / Off switch on rear of drive • Long reach connection cable for location either side of computer

AMIGA VERSION ONLY	£51.99	ATARI ST VERSION ONLY	£54.95
--------------------------	--------	-----------------------------	--------

**WE GUARANTEE** that this is the smoothest, most responsive and accurate mouse you can buy for your PC, ST or Amiga. Excellent performance, amazing low price! Versions available for ST/Amiga, PC Serial (5 & 25-way), PS/2 and Amstrad CPC. Please state which version you require when ordering.

AMIGA / ATARI ST Compatible Version -	<b>Only £17.95</b>
PC Compatible Version - State Serial, PS2 or Amstrad PC when ordering	<b>£22.99</b>

Combining the presentational advantages of advanced COLOUR output with the superior quality of Professional 24-pin printing, the Citizen Prodot-24C represents excellent value for money! Handles sustained levels of output with ease with high speed and reliability. Features an amazing array of facilities normally found on far more expensive models, yet are supremely easy to use.



- Highly versatile, full featured professional letter quality printer
- Fast 200 cps output in draft, 68 cps ■ Letter Quality mode (5 true letter quality fonts)
- Full control from easy to use front panel
- 7 Colour output; Graphics resolution up to 360 x 180dpi
- Includes special ProDisk 24 menu-driven software for configuration, font customisation and label printing
- Fast set-up, with Parallel

Complete with cable & 2 Year Manufacturers Warranty

Citizen Produt-24C Normal RRP: £ 746.35 Inc.VAT

**ONLY £269.00** including VAT,  
delivery and cable

Citizen Produt-24C Automatic Cut Sheet Feeder only £89.9

**EVESHAM MICROS SPECIAL OFFER - ALL STAR PRINTERS**  
include 12 MONTHS ON-SITE MAINTENANCE

NEW! Star LC20 supercodes LC10, faster 180/44cps .....	£ 139.99
Star LC 200 9-Pin Colour, 4 fonts, 180/45cps .....	£ 209.00
Star LC 24-10 24-Pin multifont, 180/60cps .....	£ 209.00
Star LC 24-20 24-Pin multifont, 200/67cps .....	£ 229.00
Panasonic KXP1124I super-lasi multi-featured 24-pin .....	£ 279.00

## RETAIL SHOWROOMS

Unit 9 St. Richards Road  
Evesham  
Worce WR11 6XJ  
☎ 0386 - 765180  
fax : 0386 - 765354  
Open Mon - Sat, 9.00 - 5.30

5 Glisson Road  
Cambridge CB1 2HA  
☎ 0223 - 323898  
fax: 0223 - 322883  
Open Mon - Sat. 9.30 - 5.00  
BM Dealer • Corporate Specialist

**1762 Pershore Road  
Cottredge  
Birmingham 830 3BH**  
**☎ 021 - 458 4564**  
**fax : 021-433 3825**  
**Open Mon - Sat, 9.00 - 5.30**

**ALL PRICES INCLUDE VAT @ 17.5% AND DELIVERY**  
Same day despatch whenever possible. *Express Courier Delivery (UK Mainland Only)* £6.50

## MAIL ORDER DEPARTMENT

Unit 9 St Richards Road, Evesham, Worcs WR11 6XJ

Call us now on ☎ 0386-765500

Lines open Mon-Sat., 9.00 - 5.30. Fax: 0386-765354  
Technical support (open Mon-Fri, 10.00 - 5.30): 0386-40303



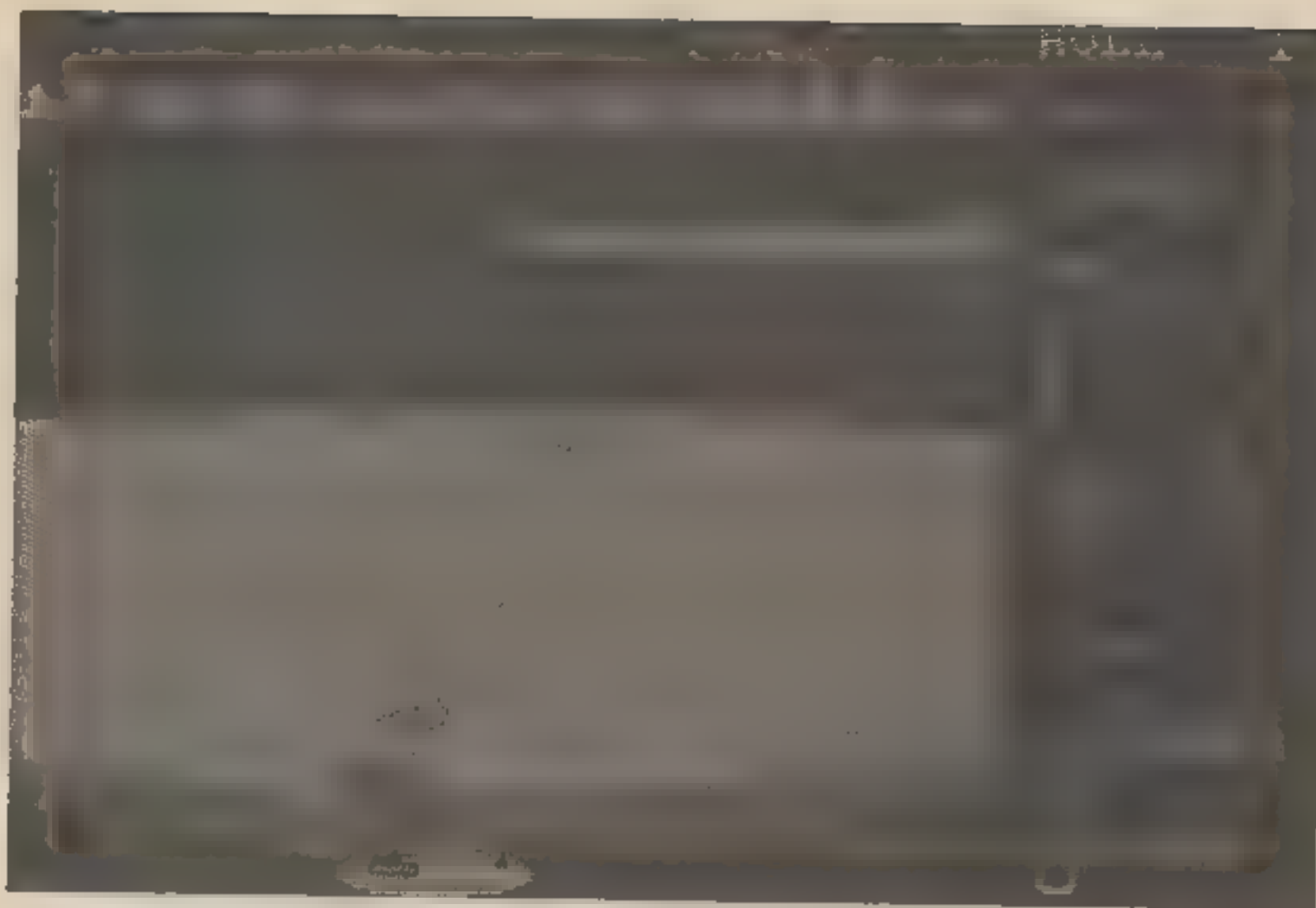
Send an Order with Cheque, Postal Order or ACCESS/VISA card details. Please allow 5 working days for Personal Cheque clearance.

Government, Education and PLC orders welcome  
All products covered by 12 Months Warranty  
All goods subject to availability



## MACHINE SPECIFICS

# SHOPPING EXPRESS



• The graphics on *Leaderboard* and *Tournament Leaderboard* are a bit, er crude... but the game itself is great.

per game.

*Multimixx 1* is a collection of classic golfing games, all from the US Gold stable. These are *Leaderboard*, *Tournament Leaderboard* and *World Class Leaderboard*.

*Leaderboard* is the game that started it all. Looking at it now, you'd wonder that it started anything. The graphics are positively prehistoric, with landscapes composed of blocks the size of entire counties. However, it does still play extremely well.

*Tournament Leaderboard* is more of the same. Another four courses, to be exact. The graphics are still entirely

uninspiring, but if you don't mind that, there's some serious one and two-player fun to be had.

*World Class Leaderboard* is another kettle of fish entirely. The graphics are completely new, and feature recognisable scenic details like trees, and water, and bunkers. The price you pay for this graphic splendour is the need to load each hole in separately. But it really doesn't take more than a moment, so the hassle factor is practically zero.

All three games share the now-standard computer golf control method of (a) selecting your club, (b) aiming and (c)



• *World Class Leaderboard* has much better graphics. My God... there are trees! Control and playability are up to the same high standards as the original.

judging when to let go of the Fire button while watching the on-screen Power/Snap meter. It's easy to grasp, but not always easy to do, especially since getting the Snap wrong sends your ball slicing off course.

*Multimixx 1* is a real golfing feast. You get loads of courses for your money, so the only thing I worry about is whether you've got the energy to complete them all. If you've already got one of these games, then don't bother. If you haven't, you can't really go wrong.

### IS A-OK OK? (EH?)

Paul Escott, editor of *A-OK* fanzine, has

just sent me his latest issue, plus details of a special offer for the following one...

Issue four, the one I've got here, is pretty well packed to the gills with information. There are listings, letters, articles (this issue has one on comms, for example), reviews and comment.

The only problem is the print quality - I think you need to find a better photocopier, Paul! Also, it looks to me as if some of the pages were put together by different people - the mag's design is not entirely consistent.

Still, those are only minor gripes. If you want to see a copy of *A-OK*, send £1 to: *A-OK* Fanzine, 31 Colebrook Road,

## WATCH THIS SPACE EVERY WEEK! FOR COMPUTER SUPERDEALS FROM THE SUPERDEAL SPECIALISTS.

### COMMODORE

#### AMIGA A500 BASE PACK:

A500 computer, mouse, T.V. Mod., manuals, Workbench  
**£299.00**

#### AMIGA A500 SCREEN GEMS:

As A500 base pack + A501 RAM Exp. + 4 great software titles + Deluxe Paint 2.  
**£389.00**

#### AMIGA A500 CARTOON CLASSICS:

As A500 base pack + 512K RAM Exp. with clock, mouse, T.V. and manuals, Lemmings, The Simpsons, Captain Planet, Deluxe Paint 3  
**£389.00**

#### AMIGA A500 CLASS OF THE 90'S:

As Screen Gems but with 11 software titles, 10 disks, mouse mat, Resource File, Introductory Video  
**£459.00**

### ATARI

#### ATARI 520STE DISCOVERY PACK 2:

512K computer, mouse, manuals + all leads, 4 games + ST Basic  
**£315.00**

#### ATARI 1040STE CURRICULUM:

1Meg RAM, Educational software, Word Proc., D.Base, Spreadsheet, Hyperpaint 2, Music Maker 2.  
**£369.00**

### BUSINESS MACHINES & PERIPHERALS

We sell a range of P.C.'s from Goldstar & Strand.  
e.g. Strand 80286 VGA with Works V2.0 **£789.00**  
Monitors from **£118.00** (SVGA Mono).  
Multi Scanning Monitors from **£350.00**  
Printers from **£118.00** (9 pin), **£199.00** (24 pin)  
Please phone for your specific requirements.

### ATTENTION BUSINESS USERS! BUSINESS MACHINES CAN PLAY GAMES AS WELL!!!

VAT: All prices are inclusive of 17.5% VAT  
DELIVERY: Please add £5.00 for delivery within UK.  
PAYMENT: Cheques/PO's made payable to  
DATACITI COMPUTER SERVICES  
PERSONAL CHEQUES: Please allow 5 working days for clearance  
GOODS NOT OFFERED ON TRIAL BASIS.

## DATACITI COMPUTER SERVICES

UNIT 27, DARIN COURT, CROWN HILL, MILTON KEYNES, MK8 0AD  
TEL: 0908 262210

Open Monday to Friday from 10.00am to 5.30pm, Saturday 10.00am to 1.00pm



# MACHINE SPECIFICS

## UBI SOFT'S MILITARY MIGHT...

French company Ubi Soft will be attacking the Christmas market with a new compilation called *Air/Sea Supremacy*. Well, the title may be new but there are some familiar old chestnuts in there - not bad uns mind.

- *Silent Service*
- *Carrier Command*
- *P-47 Thunderbolt*

Gunship  
F-15 Strike Eagle  
Since between them they cover just about every nautical/aerial contingency you should be well covered!

*Air/Sea Supremacy* should be out by mid-November, and will cost £15.99 on tape, £20.99 on disk. You'd better start saving.

Shirley, Solihull, West Midlands B90 2LB. If you're impressed, you can take out an annual subscription for £6.

And next issue's special offer? Send 70p and you'll get a cassette containing, 'an exclusive 20-location demo of *The Smirking Horror* by Jason Davis'. The

*Smirking Horror* is a rather good home-brew adventure game.

Rod Lawton

Rod Lawton is the editor of *Amstrad Action*, the UK's leading magazine dedicated to the Amstrad CPC, and Plus machines.

## CHEAT CITY!

• **NARC** - Richard Harris ■ Hemel Hempstead says that to get infinite lives in the Ocean game NARC, all you have to do is attain infinite lives is redefine the keys as G,R,U,N,T,S.

• **LOOPZ** - Simon Warford Craig Davis have come up with the passwords for Audiogenic's Loopz:

- 5 - EASY
- 10 - ARTY
- 15 - FOXY
- 20 - CRAS
- 25 - WHET
- 30 - POLL
- 35 - ZUIS
- 40 - VEST
- 45 - EMAMA

**HERO QUEST** - Ian Williams of Nazeing has some tips for *Hero Quest* ■ give you

good health, riches and weaponry:

- 1) At the beginning of each quest save all the characters
- 2) Begin another quest, but do not leave the room with the stairs
- 3) Using the healing spells, heal any ailing characters
- 4) Search the room
- 5) Exit the room via the stairs
- 6) If necessary buy weapons or armour
- 7) Repeat step 1
- 8) If necessary repeat from step 2 (any number of times)

# C64

- Civil War action throughout the North and South
- ZZAP!64 gone - a sign of the modern times?
- Total Eclipse made totally simple with total fun

## AMERICAN ANTICS

Yes, I know the game has been out for some time now, but my review copy has only just arrived - not that I'm complaining, mind you.

The game is based on the American Civil War, and owes a lot to 'Les Tuniques Bleues', an off-the-wall Belgian comic. The game is surprisingly entertaining despite its strategy label.

Gameplay is reasonably

straightforward; you can choose to play either the Yankees or the Confederates, with the aim of both sides being to occupy all available territory. And it's really as simple as that.

After the amusing 'Deliverance' intro comes the options screen; here you can choose your side, the three different strengths of both armies, arcade/strategy mode, additional hazards (Indians and

Continued on next page >



• North and South is the most fun to be had out of the American Civil War.

# MEMOREX COMPUTER SUPPLIES

Each Memorex product is subjected to the toughest quality control procedures in the industry. Every diskette is guaranteed to be 100% error free at the highest clipping levels. Exceeding all ANSI standards. All disks include labels and envelopes.

## MEMOREX BRANDED DISKETTES

	Box 10	10+
3.5" DS DD 720K	£7.80	£7.40
3.5" DS HD 1.44Mb	£12.80	£11.90
5.25" DS DD 500K	£4.90	£4.60
5.25" DS DD 1Mb	£5.80	£5.50
5.25" DS HD 1.2Mb	£7.80	£7.40

## MEMOREX BRANDED COLOURED

	Box 10	10+
3.5" DS DD 720K	£8.90	£8.10
5.25" DS DD 500K	£6.80	£6.20

## PLAIN LABEL DISKETTES

	Box 10	10+
3.5" DS DD 720K	£4.40	£4.00
3.5" DS HD 1.44Mb	£6.60	£6.10
5.25" DS DD 500K	£3.80	£3.40
5.25" DS DD 1Mb	£4.10	£3.70
5.25" DS HD 1.2Mb	£5.70	£5.20

## PLAIN LABEL COLOURED

	Box 10	10+
3.5" DS DD 720K	£5.70	£5.40
5.25" DS DD 500K	£5.00	£4.80

## BULK DISKETTES

	25	100	250	500
3.5" DS DD 720K	36	33	32	31
3.5" DS HD 1.44Mb	62	58	57	56
5.25" DS DD 500K	25	24	23	22
5.25" DS DD 1Mb	27	26	25	24
5.25" DS HD 1.2Mb	42	40	39	38

## BULK COLOURED

	25	100	250	500
3.5" DS DD 720K	45	44	43	41
5.25" DS DD 500K	34	30	29	28

## PRINTER RIBBONS

AMSTRAD	6	12	EPSON	2	6	12
825B/8512/LQ3500MS	£4.10	£3.85	£3.50	EX800/EX1000	£3.60	£3.30
852B/8512/LQ3500FA	£4.10	£3.85	£3.50	FX100/105/1000/1050	£3.50	£3.20
DMP2000/3000	£3.50	£3.20	£3.00	LQ1000/LQ1050	£3.90	£3.60
DMP3160/3250	£3.50	£3.20	£3.00	LX400/800/850	£2.80	£2.50
DMP4000	£4.50	£4.20	£3.90	MX/FX80/85/800/850	£2.80	£2.50
LQ5000DI	£5.50	£4.70	£4.40	LQ400/500/550/800/850	£3.30	£3.00
PCW9512MS	£3.50	£3.20	£3.00	LQ860/1060/2550	£4.20	£3.90
BROTHER				PANASONIC		
HR5	£3.30	£3.00	£2.80	KXP1080/81/82/83	£3.30	£3.00
HR15/20/25/35/40MS	£3.30	£3.00	£2.80	KXP1124	£3.30	£3.00
HR15/20/25/35/40FA	£3.50	£3.10	£2.90	KXP1180	£3.30	£3.00
M1009/1109/1209/1224	£3.50	£3.20	£3.00	KXP3131/3151MS	£2.20	£1.90
M1409	£4.50	£4.20	£3.60	KXP3131/3151FA	£2.60	£2.40
M1509/1709	£5.40	£5.00	£4.70	KXP1540	£4.50	£4.20
M1724	£4.70	£4.40	£4.20	KXP1592/1595	£3.30	£3.00
CITIZEN				STAR		
120D-180E/LSP10/100	£3.20	£2.90	£2.80	DP510/DP515	£1.60	£1.30
HQP40	£3.30	£3.00	£2.80	GEMINI 10X/SG10/SG15	£1.60	£1.30
HQP40 colour	£23.00	£21.00	£20.80	LC10/NX1000	£8.40	£2.20
HQP45	£4.90	£4.50	£4.30	LC10 colour/rainbow	£8.10	£7.50
MSP10E/40/50	£2.70	£2.50	£2.30	LC15/FR10/FR15	£3.30	£3.10
MSP10E/40/50R	£2.70	£2.50	£2.30	LC2410/LC2415	£3.30	£3.10
MSP15E/25/45/55	£3.50	£3.20	£3.00	NB24-10	£4.70	£4.30
Premiere 35MS	£2.50	£2.30	£2.10	NB24-15/NB-15	£5.10	£4.70
Premiere 35FA	£2.80	£2.50	£2.30	NO10/NL10/NR10	£4.20	£3.80
Swift 24	£3.30	£3.00	£2.80	NO15/NR15/NX15	£4.60	£4.30
Swift colour	£18.30	£17.00	£15.90	PowerType MS	£2.20	£1.90

## BRANDED ORIGINAL TONER CARTRIDGES

CANON/HP/WANG		
LPB-8/HP1	£58.00	£55.50
LPB-8II/HP1I	£58.00	£55.50
LPB-4/HP1II	£58.00	£55.50
PPB-3/HP3Si	£112.00	£107.00
DATA PRODUCTS		
LZR 2600 pld 6	£107.00	£97.00
LZR 1200 pld 6	£118.00	£111.00
LZR 65II	£40.00	£37.00
EPSON		
6000	£12.50	£12.00
IBM		
4216	£19.00	£18.00
4019E	£170.00	£160.00
3816 pld 2	£69.00	£64.00
KYOCERA		
F8/10-22/3000	£23.00	£22.50
F18/3300	£33.00	£30.00
MANNESMANN		
MT 905	£23.00	£22.00
MT 910	£89.00	£83.00
RICOH		
30/4080/81/4150	£38.00	£35.00
6000	£12.50	£12.00

## DATA CARTRIDGE

TYPE	LENGTH	CAPACITY	1+	5+
DC1000	185'	20Mb	£12.90	£12.30
DC2000	205'	40Mb	£13.30	£12.90
DC2120	307.5'	120Mb	£17.80	£17.20
DC3000XLP	450'	45Mb	£13.70	£13.10
DC600A	600'	60Mb	£15.80	£15.20
DC6037	150'	37Mb	£19.30	£18.80
DC6150	600'	150Mb	£18.20	£17.60
DC6250	1020'	250Mb	£22.30	£21.70
DC6320	620'	320Mb	£22.90	£22.30

## DISKETTE STORAGE

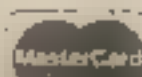
SIZE	SPECIFICATION	PRICE
5.25"	10 disk box	£1.10
5.25"	50 disk box with lock	£4.70
5.25"	100 disk box with lock	£5.30
3.5"	40 disk box with lock	£4.50
3.5"	80 disk box with lock	£4.90
3.5"	10 disk box	£1.10

## CONTINUOUS LISTING PAPER

PRODUCT	QUANTITY	PRICE
11 2/3 x 9.25 plain EPP	70GSM 500 sheet pack	£6.20
11 2/3 x 9.25 plain EPP	70GSM 1000 sheet box	£11.70
11 2/3 x 9.25 plain EPP	70GSM 2000 sheet box	£20.90
11 2/3 x 9.25 plain EPP	80GSM 500 sheet pack	£6.70
11 2/3 x 9.25 plain EPP	80GSM 1000 sheet box	£12.70
11 2/3 x 9.25 plain EPP	80GSM 2000 sheet box	£23.30

## EURODATA

12a Adam & Eve Street, Quakers Yard, Market Harborough, Leicestershire, LE16 7LT. Tel/Fax: (0858) 433992.



Prices subject to change. E. & O.E.

All prices include VAT @ 17.5%.

Add £2.80 postage & packing. Cheques made payable to Eurodata.



# BOSTON SYSTEMS

WALSALL, WEST MIDLANDS PHONE (0922) 725331.

For	QUALITY	ADVICE	RELIABILITY	SERVICE	PRICE
-----	---------	--------	-------------	---------	-------

- Industry Standard
- High Build Quality
- 12 Months Guarantee
- Extended Guarantee Option

282/12	12MHZ 286	£ 590.00
286/16	16MHZ 286	£ 636.00
386/16	16MHZ 386SX	£ 685.00
386/20	20MHZ 386SX ( 32KB Cache)	£ 752.00
386/25	25MHZ 386 ( 32KB Cache)	£ 922.00
386/33	33MHZ 386 (128KB Cache)	£ 999.00
486/20	20MHZ 486SX (128KB Cache)	£1400.00
486/33	33MHZ 486 (128KB Cache)	£1550.00

All systems are supplied complete and ready for use.

Standard features include VGA Mono monitor, High quality enhanced keyboard, 44Mb Hard Disk, 1Mb Main Memory, choice of 3.5" or 5.25" floppy drive, serial and parallel ports.

## Options:

Additional floppy drive	£50.00	VGA Colour	£100.00
Extra Memory ( per 1Mb)	£45.00	Super VGA	£115.00
Mouse systems from	£15.00	Fax/Modem card	£ 85.00
Alternative Hard Disk Sizes (Call for Price)			

## Printers:

Full range of printers from Hewlett Packard and Epson.

## Software:

Most popular applications available ie, Word Processing ,Database, Spreadsheet, etc. SAGE Accounting.

## Complete Solutions:

Please call to discuss your own particular requirements.

Prices are excluding Vat & carriage. Specifications and prices subject to change without notification.



## MACHINE SPECIFICS



- A fine example of the superb graphics you'll find in Infogramme's highly enjoyable *North and South*.

◀ bad weather), foreign aid and the starting date. This is all nicely covered by a superb icon system, probably the best I have encountered, and once you've chosen your set-up, a photographer records it all on film... a nice touch.

The game centres on a map of America, very much like the board in a board game, and here your soldiers (each representing a battalion) can be moved from state to state. The more troops on your side, the better your chances of winning the war, and you can only increase your troop quota with loads of money. So, it's up to you to occupy areas with railways running through them in order to secure the loot.

The arcade mode is ultimately the most enjoyable, and has some amazing animated sequences. There are some neat touches, such as the indians throwing axes at your men, and a sub game set inside enemy forts also adds to

the entertainment

Strategy mode cuts out the animated bits, as well as much of the decision-making - this lessens the amount of disk access, but games become VERY dull.

The game comes into its own in two

player mode, and is the most fun to be had out of the Civil War. The graphics are the highlight, with some colourful and beautifully animated scenes, and everything fits together wonderfully. The music and jingles by Jeroen Tel are also superb, and really add to the atmosphere.

If you're after a bit of historical fun, give *North & South* a whirl - it's amazingly refreshing.

## THE LAST ZZAP

At the eleventh hour, I received word that Newsfield, publisher of *ZZAP!*64, *Crash*, *Raze* and several other titles, had gone into voluntary liquidation - which means that the said publications probably won't see the light of day again.

Although recently the magazine's quality had floundered, **ZZAP!** was once one of the most respected computer

## RAINBOW TIPS

If the *Rainbow Collection*, featured in *Express 149*, is giving you a few hassles, why not try the following reset POKEs:

- *Bubble Bobble* – POKE 1240,189:SYS 58518
- *Rainbow Islands* – POKE 29535,189:SYS 2061
- *New Zealand Story* – POKE 3215,173:SYS2306

publications around. Sad indeed, leaving only two dedicated C64 magazines on the market.

Another worrying aspect is Newsfield's software house *Thalamus* with some superb titles such as *Winter Camp*, *Creatures 2* and *Nobby the Aardvark* in development, let's hope that the company doesn't meet the same fate as it's parent. The industry waits with bated breath.

## 3D BLUNDER

Oops! If you cast your mind back to *Express* 145, you may possibly recall my *3-D Construction Kit* review. In my haste I neglected to mention the prices, so here they are; cassette £24.99, disk £24.99 - and that includes the superb tutorial video (making the package incredible value for money).

**☎** For further information, contact Domark on 081-780-2222.

**Andrew Roberts**

# RIBBONS DIRECT LIMITED

**We specialise only in printer consumables.**

☆☆ If it prints - we can get it ☆☆

## RIBBONS

AMSTRAD DMP:	5.85	5.80	1.35
8410 1512 Nylon or M Strike	3.75	3.70	1.15
PR100 00/3000, 3160	3.75	3.70	1.85
PR100 00/1512, 1640	5.75	5.70	4.95
9512 Multistrike	3.75	3.70	2.85
9512 Nylon	3.75	3.70	3.00
9512	6.75	6.70	5.45
APPLE Imagewriter I/2	3.60	3.45	3.30
BROTHER H10/15/15X1	2.75	2.70	1.95
M1009/1109/1209/1224	3.15	3.10	2.85
M1409	6.00	5.95	5.70
M1509/1709	4.95	4.90	4.65
HR5	3.15	3.10	2.85
AT 15/LW10	2.40	2.35	2.10
CANON 1080/1156/A50/55	3.15	3.10	2.85
CENTRONICS GLP	3.15	3.10	2.85
Heritage	3.15	3.10	2.85
CITIZEN Power	6.35	6.30	6.05
1200/1400/1600/180	3.15	3.10	2.85
PR140	3.80	3.75	3.50
PR140	9.20	9.15	8.95
PR140/120	4.50	4.45	4.20
PR140/120 Colour Original	5.00	4.95	4.70
COMMODORE MP51500	5.30	5.25	5.00
MP51500	14.10	13.95	13.80
MP51500	3.95	3.90	3.65
MP51500	3.85	3.80	3.55
MP51500	4.90	4.75	4.60
MP51500	3.75	3.70	3.55
DIABLO Hyper 2	3.25	3.20	3.05
	3.25	3.20	2.95
EPSON EX8 C 1000	3.60	3.45	3.30
RX80/MX80, 85/FX800/LX800	2.50	2.35	2.20
RX100/MX100/105/FX1000	3.25	3.10	2.95
LX80/85/G	2.65	2.50	2.35
LQ1500/1550/LP1500	3.15	3.10	2.85
LQ800/850/500/400	3.90	3.75	3.60
LQ1000	3.90	3.75	3.60
LQ2550/1060/860	5.75	5.60	5.45
ERICSE Black or Purple	5.25	5.10	4.95
JUKI 610/MS	3.25	3.10	2.95
6100SS	2.25	2.10	1.95
6200/6300MS	2.25	2.10	1.95
MANNESEMAN TALLY MT80/81	3.60	3.45	3.30
MT85/87	6.45	6.30	6.15
MT86/88	5.75	5.60	5.45
NEC P6+/P1/P60/P70	7.20	7.05	6.90
P2200/P2+	4.65	4.50	4.35
P30 Original	7.85	7.60	7.45

## RIBBONS

	1.0	2.0	3.0
OKITA 1500 B0500 70 153	2.25	2.10	1.95
81	3.25	3.10	2.95
OLY 1500 1530 3300 321	3.25	3.10	2.95
12.3.34	4.95	4.70	4.55
89300	13.65	13.90	13.75
OLIVETTI MA250	4.25	4.65	4.45
Plus 1500	9.05	8.90	8.75
OLY 1500 MA2003	3.85	3.70	3.55
MA1005	5.2	5.05	4.90
OLY 1500	14.10	13.95	13.80
OLYMPIA 1500	1.90	1.35	1.20
1500 1500	3.25	3.10	2.95
PANASONIC KXP1540	3.15	3.00	2.85
KXP1124 1180 1095 1080	4.45	4.30	4.20
KXP1624	5.15	5.00	4.95
RITEMAN Informer	3.20	3.05	2.90
15/Mitsui	5.25	5.10	4.95
SEIKOSHA GP100	2.50	2.35	2.20
SG100	2.50	2.35	2.20
SG100 1200 SL80	3.45	3.30	3.15
Mit 1500	16.70	15.55	15.40
SHARP ZX400/500/PA3320	2.50	2.35	2.20
STAR Gemini/SG15/SG10	2.40	2.25	1.95
Radix 10	5.80	5.65	5.50
Radix 15	7.10	6.95	6.80
NL10/ND10/NR10/NB24-10	4.25	4.10	3.95
NR15/NR15/ND15	7.95	7.80	7.65
LC10/NX1000	2.95	2.80	2.70
LC10 Colour	5.90	5.75	5.60
LC24-10/XB24-10/LC24-200	4.60	4.35	4.20
LC24-20/LC24-200 Colour	14.40	13.25	14.10
LC15	4.50	4.35	4.20
FR10/FR15/LX9	7.50	7.35	7.20
LC200B Original	6.40	6.30	6.20
LC200 Colour Original	2.65	2.50	2.35
TOSHIBA 351C/2100/R02	4.15	4.00	3.85
3415L/3515L	5.95	5.80	5.65

WE SPECIALISE IN UNUSUAL RIBBONS - IF  
YOURS IS NOT LISTED - TELEPHONE

## INK JET CARTRIDGES

<b>CANON BJ10E</b> .....	18.25	18.15	17.95
<b>BJ17E</b> .....	15.25	15.15	14.95
<b>BJ1760 Black</b> .....	13.95	13.80	13.65
<b>BJ1760 Colour</b> .....	19.75	19.10	18.95
<b>KODAK · DICOMIX 150/300</b> .....	9.40	9.45	9.30
<b>EPSON SQ2000</b> .....	39.50	39.35	39.20
<b>SQ2500</b> .....	27.40	27.35	27.20
<b>SQ2550</b> .....	28.95	28.70	28.55
<b>HEWLETT PACKARD</b>			
<b>Think Jet - Plain</b> .....	9.60	9.45	9.30
<b>Think Jet - HP Paper</b> .....	9.60	9.45	9.30
<b>Point Jet - Black</b> .....	24.45	24.30	24.15
<b>Point Jet - Colour</b> .....	30.05	30.50	30.95
<b>Desk Jet 500</b> .....	15.35	15.20	15.05
<b>Desk Jet 500 Twin Refill</b> .....	10.75	10.80	10.65
<b>INTERGREX 3852</b> .....	13.95	13.80	13.65
<b>MANNESMAN TALLY MT90</b> .....	11.50	11.35	11.20
<b>MT91</b> .....	15.55	15.40	15.25

*L. gossypii* var. *Zelenskyi* L. 1908 recorded delivery.

## PAPER AND LABEL SUPPLIES

## PAPER

Single Part, Micro Perfl Plain 2000 Sheets	
60 GSM .....	14.95
70 GSM .....	16.95
80 GSM .....	18.95
A4 .....	21.50

All paper is despatched by  
2/3 day courier - all prices  
include VAT + Carriage is  
£3.95 per order

## LABELS

1 across address labels, white	All prices include VAT. delivery is charged @ 50p per 500 labels
500 labels.....	
1000 labels.....	
2500 labels.....	

**RIBBONS DIRECT LTD**  
8 PROSPECT STREET,  
BRIDLINGTON, YO15 2AJ

NO HIDDEN EXTRAS ON RIBBONS  
THE PRICE YOU SEE IS THE PRICE YOU PAY.

**ALL RIBBONS ARE SENT CARRIAGE FREE!**

**TELEPHONE: 0262 400877 (24 hours) FAX: 0262 400903**

Trade & Education orders welcome



# SPECTRUM

- Experience very cheap thrills with *Trail Racer*
- The ZX81 returns! Sinclair emulation the 16-bits
- The innermost secrets of the Spectrum revealed

## ANOTHER PD BARGAIN

The best things in life are usually pretty expensive so it's a nice surprise when you can get something for next to nothing, without having to collect 67 tokens and pay £2.99 for postage and packaging, especially when it turns out to be very good. Yep, I'm on about that wonderful Public Domain place again, a mystical land where software can be freely copied, ever plentiful and best of all, dead cheap.

Last column I told you about *Dice*

*Mania*, an addictive little puzzler just introduced into the Public Domain. You can avoid computer shops and for that matter banks again this week by getting hold of *Trail Racer*, an excellent PD bargain that's guaranteed to leave you with a bulging wallet, a feeling of smugness but unfortunately very little hair.

It's a viewed-from-above, race against the clock game where you guide your little, erm, trail racer(?) over a playing area divided into squares of

varying textures. Some squares make you go frighteningly fast, some reverse the controls, some make you jump and others slow you right down. There are also big expanses of blackness that you have to jump over in order to reach the end of the section.

This type of thing's been done a few times before on the Spectrum but never quite as flashily as this. As soon as it's loaded, a groovy tune starts up and rainbow colours flow through the title. Before each level sampled speech warns you to 'Get Ready' and on screen everything moves smoothly and at high speed.

While technically impressive the fast scrolling makes for difficult play even if you do have 10 lives to waste. Basically, *Trail Racer* is an arcade game in the classic sense with lots of colourful wibbly wobbly bits, sound effects straight out of an old Williams coin op (*Defender*, *Robotron* etc.) and a large high score table that you'll never climb to the top of.

It's good, difficult fun and for next to nothing, pretty damn unmissable. Try contacting any of the PD libraries mentioned previously to get a copy. I know for sure that Garner Designs (57 Lovers Walk, Dunstable, Beds LU5 4BG.) have it on their PD No. 9 tape/disk along with a few other things and that it was included on the July issue (No. 47) of the fanzine *Outlet* (605 Loughborough Road, Birstall, Leicester LE4 4NJ).

If you've found any Speccy PD bargains that you'd like to recommend to fellow impoverished Spec-chums send them to me ■ *New Computer Express*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

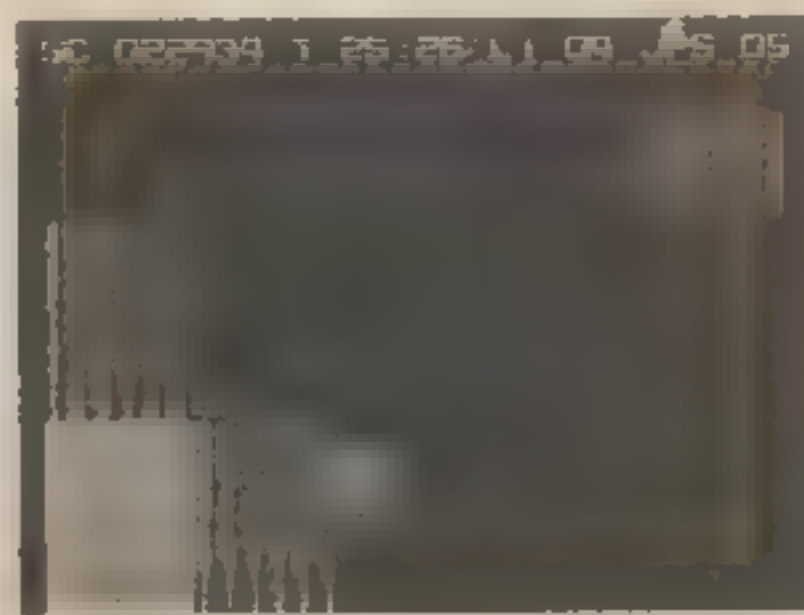
## DARK SECRET

Thanks to John Mayfield of Essex for the following exposure of one of the Speccy's most useful secret features:

"To access Amstrad's built-in test mode on the Plus 3 and Plus 2 hold down BREAK while pressing the Reset button. A testcard should appear on screen. Then press down Q, A, Z and P, L, M simultaneously. Your Speccy will then be put through a series of gruelling tests. Make sure you don't leave any important disks in the Plus 3's drive."

## ZX81 LIVES!

I suppose it's just possible that in our midst are some traitorous, two-timing types who own a Speccy and another computer as well. As repellant as that is, I mention such things because of various Sinclair-related software available for the



• When you get a program from the Public Domain the last thing you expect is superb graphics and great, funky tunes. But that's exactly what you get with *Trail Racer* - if you excuse the Kermit with a bow tie sprite, that is!

FREE  
CATALOGUE

## The 'World's Best' just got better!

### General Shareware Volume 2

You have an idea of the software you want - but can you find it? - NO. Why can't you get a set of demo programs to try? - Well, now you can.

There are over 12,800 files to try on this software collection in areas as diverse as Wordprocessing, games, spreadsheets, programming, databases and many more.

Programs for you to try in the comfort of your own surroundings and, when you've found the program you want, simply send the author the cost and in return you'll receive the most recent version of the software and any other files or documentation that may be necessary - OFTEN AT A MUCH LESSER PRICE THAN EQUIVALENT COMMERCIAL SOFTWARE.

If ever you needed a reason to buy a CD-ROM drive - this is it! Look at these other features too:

- Search for files by filename, category or description and decompress direct to disk!
- Incorporates a complete BBS. Run your own BBS in minutes.
- Unique sound blaster file collection.
- Windows section now contains over 440 files.
- Audio track describes installation and a tutorial.

This is the Micro Haus General Shareware Disk Vol 2. All files current as at 1 Sep 91.

Please note: All cheques and correspondence should be addressed to Micro Haus Ltd

### Ordering Information

Tel: (0452) 371707  
Fax: (0452) 610022  
Write: PO Box 149  
Gloucester  
GL3 4EF

We accept payment by  
cash, cheque, Visa and  
Mastercard.

The price for Volume 2 is:  
UK - £88.00 inclusive  
EEC - £80.00 inclusive



## The Best CD-ROM Bundle Available

Searching for the best **Only £320**  
way into CD-ROM?  
Then look no further! **+ VAT**

For a limited period only we are able to offer the GenStar 2000 External drive and SIX free software titles for the incredibly low price of £320 plus VAT and delivery.

The software titles included are:

- Mammals - A multimedia extravaganza of picture and sound
- Illustrated Encyclopedia - THE learning tool for all generations
- World Atlas - The globe at your fingertips
- Times and Sunday Times - The Gulf War edition
- Information World Review - Featuring the SimpleFace system
- Micro Haus General Shareware Volume 1

The final disk is the Micro Haus General Shareware Volume 1, a world class product which enjoyed huge success in the CD-ROM arena. Containing 10,000 files, it features some of the best Shareware and Public Domain software ever to be published. It is probably the best method of reviewing software on a 'try before you buy' basis.

## Six Free Titles!



If your letter  
writ<sup>e</sup>ing leaves  
som<sup>L</sup>ething to be  
de~~d~~sired, read  
Amiga Shopper.

Word processors beat typewriters every time, but which program is best? In the biggest ever test of Amiga word processors, we put 11 programs through their paces, and some are found sadly lacking. You need a word processor, but don't make an expensive mistake – read Amiga Shopper.

# AMIGA SHOPPER

**OUT NOW - ONLY 99 PENCE**

THIS MONTH'S  
ISSUE INCLUDES  
A SPECIAL  
FREE GIFT



## CONSOLES

### ANOTHER PD BARGAIN

The best things in life are usually pretty expensive so it's a nice surprise when you can get something for next to nothing, without having to collect 67 tokens and pay £2.99 for postage and packaging, especially when it turns out to be very good. Yep, I'm on about that wonderous Public Domain place again, a mystical land where software can be freely copied, ever plentiful and best of all, dead cheap.

Last column I told you about *Dice Mania*, an addictive little puzzler just introduced into the Public Domain. You can avoid computer shops and for that matter banks again this week by getting hold of *Trail Racer*, an excellent PD bargain that's guaranteed to leave you with a bulging wallet, a feeling of smugness but unfortunately very little hair.

It's a viewed-from-above, race against the clock game where you guide your little, erm, trail racer(?) over a playing area divided into squares of varying textures. Some squares make you go frighteningly fast, some reverse the controls, some make you jump and others slow you right down. There are also big expanses of blackness that you have to jump over in order to reach the end of the section.

This type of thing's been done a few times before on the Spectrum but never quite as flashily as this. As soon as it's loaded, a groovy tune starts up and rainbow colours flow through the title.

Before each level sampled speech warns you to 'Get Ready' and on screen everything moves smoothly and at high speed.

While technically impressive the fast scrolling makes for difficult play even if you do have 10 lives to waste. Basically, *Trail Racer* is an arcade game in the classic sense with lots of colourful wibbly wobbly bits, sound effects straight out of an old Williams coin op (*Defender*, *Robotron* etc.) and a large high score table that you'll never climb to the top of.

It's good, difficult fun and for next to nothing, pretty damn unmissable. Try contacting any of the PD libraries mentioned previously to get a copy. I know for sure that Garner Designs (57 Lovers Walk, Dunstable, Beds LU5 4BG.) have it on their PD No. 9 tape/disk along with a few other things and that it was included on the July issue (No. 47) of the fanzine *Outlet* (605 Loughborough Road, Birstall, Leicester LE4 4NJ).

If you've found any Speccy PD bargains that you'd like to recommend to fellow impoverished Spec-chums send them to me at *New Computer Express*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

### DARK SECRET

Thanks to John Mayfield of Essex for the following exposure of one of the Speccy's most useful secret features:

"To access Amstrad's built-in test mode on the Plus 3 and Plus 2 hold down BREAK while pressing the Reset button. A testcard should appear on

- Sega set to release competitively priced CD-ROM
- Updated R-Type blasts right on to PC Engine
- Sequels for the Game Boy *Castlemania* and *Nemesis*

### MEGA-CD RELEASE

Sega's Mega-CD, their CD-ROM expansion unit, will be officially released in Japan on 1 Dec for a cut price of 49800 yen (approx. £217).

A machine is as good as the software, and the two games that should be available for the CD system will be a great looking arcade action game called *Ernest Evans* by Wolfteam, and a graphic adventure game called *Detonator*



- Make sure you brush up on your Japanese before you go delving into the action-packed adventures of *Detonator*

featuring lots of animation sequences. Although, as the latter is all in Japanese, it won't be easy to play unless you know the language!

### US OFFERS

Over in America, the Super NES (the US version of the SuperFamicom) is now available at Toys 'R' Us stores at \$199.95, bundled with *Super Mario World* game.

Also available are three titles for the machine, from Nintendo - *Pilotwings*, *F-Zero* and *SimCity*.

As for the TurboGrafx-16 (the US version of the PC Engine), NEC are

### PCKID BONUS

Here's a simple tip on Hudson's hilarious arcade adventure *PCKID 2*. On the Mode Select screen, hold down button II and press RUN on the first option to enter the Bonus level select screen.

# UnMouse™

by

# MicroTouch

The *UnMouse* is a compact, touch sensitive tablet that represents a new concept in pointing devices. The *Unmouse* has 3 modes: **Absolute** (for accurate pointing), **Mouse** (total replacement mouse function), and as a **Trackball**. It provides very accurate cursor control along with graphic input and function key selection.

The *UnMouse* works by just touching the 3 x 4.5 inch glass tablet with your *finger* (the best pointing device ever!!), or the supplied conductive stylus. By sliding a template under the glass the *UnMouse* becomes a PowerKeyPad, and makes use of the function keys. (This function is programmable by the user, but comes with preprinted templates for popular applications.) To use it, you merely touch a key and press. Drawing is done in Absolute mode by using the *UnMouse* stylus provided. Images may be traced by inserting them into the template holder and drawing them on the tablet.

The *UnMouse* is 100% Microsoft Mouse Compatible and comes complete with drivers for DOS and Windows 3, and is suitable for IBM Compatible PCs with RS232 serial interface and all Macintosh computers with Apple Desktop Bus. (All trademarks acknowledged.)

PRICE : £ 159.00. (Inclusive of VAT and courier delivery within UK)

To order and for further information, call Andy Andrews, Picture Perfect (UK) Ltd, Dept NCE (Authorised *UnMouse* Agent): on 0831 853137, or 0264 333643. Fax to 0264 339455.



# MACHINE SPECIFICS

giving away a music CD with every CD-ROM bought. The CD (which includes graphics - CD-G) contains 13 tracks from Jimmy Hendrix to Fleetwood Mac, plus a bit of modern art as graphics.

This is a good ploy by NEC to sell the CD-ROM as a machine that can play CD-Gs, as it's cheaper than normal CD-G players.

## R-TYPE RETURNS

PC Engine owners who have a CD-ROM and missed out on Hudson's excellent conversion of R-Type will be able to get the game on CD-ROM from Irem under the title of 'R-Type Complete CD', which should be available around December.

As yet, no information on whether the CD will contain addition levels, or other options.

A Beast of a game Psygnosis' *Shadow of the Beast* will appear on your Megadrive some time in December on 4 megabit cartridge from Victor Musical Industries, and it looks very much like the Amiga version.

However, the game looks to be more colourful and even brighter...well, you'd expect so, as it can display more colours than the Amiga.

It also features some great special effects when you warp around. We'll just have to wait and see how it plays and if it animated better!

## FOOTBALL CRAZY

Strangely enough, Megadrive owners have been starved of a decent football game for their machine... but that will

## MEGADRIVE CHALLENGE

Here's a challenge for all you *Sonic the Hedgehog* owners on your Megadrive. Try to complete the first stage in 29 seconds for a 50,000 point bonus. You have to be fast!

soon change in December, as Sims Co. are to convert Tecmo's coin-op football game - *World Cup '90* to the MD, under the title of 'World Cup '91 MD' (provisional title).

If it plays as well as the coin-op, it should be worth investigating - but it'll only be on a 2 megabit cartridge!

## ANOTHER SHOOT-'EM-UP

At least a couple of weeks ago, I mentioned that the first shoot-'em-up to be released for the Mega-CD will be *Super Aleste*. Well, the game will also be converted to the Super Famicom by Toho Co. on 8 megabit cartridge, and very promising it looks too, although it

won't appear until next year.

Game Gear owners will also have their own version of the game under the very original title of *GG Aleste*, although GG actually stands for Galvanic Gunner. The game will be programmed by the original producers of the game - Compile, and should be available in November.

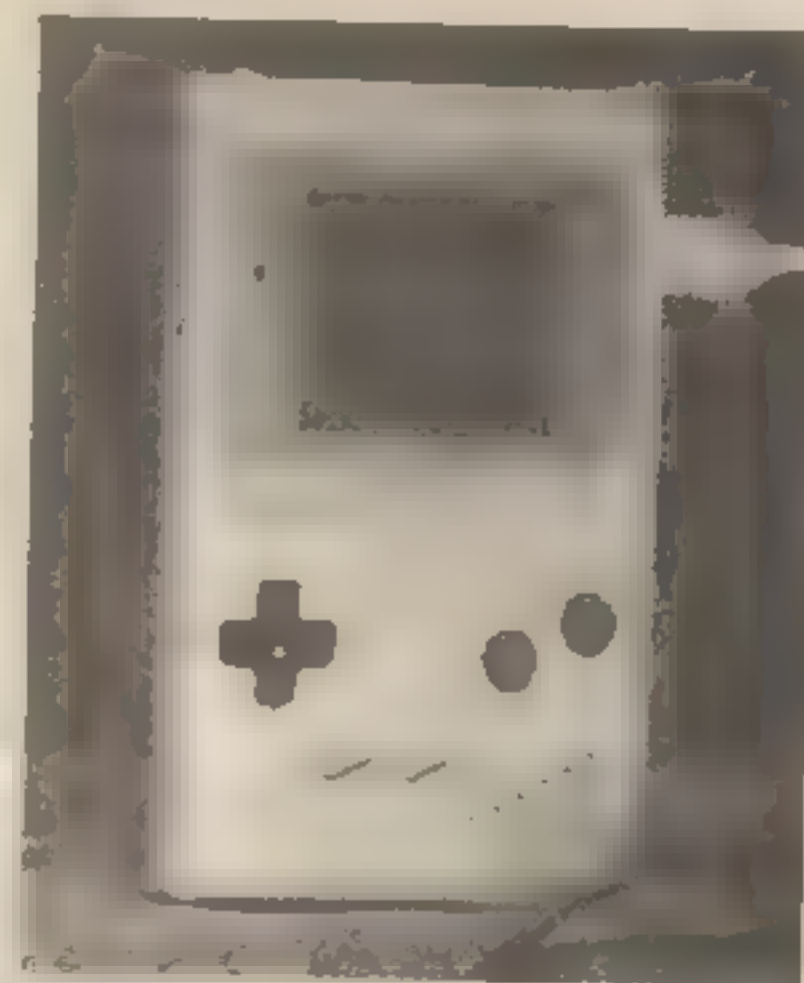
## KONAMI ACES

As I reported in my first column, Konami have now released sequels to *Castlevania* and *Nemesis* for the Game Boy. Both game are excellent, and great improvements on the originals.

The main trouble with the original *Castlevania* was that it was too difficult, requiring pixel perfect jumps and the game is rather slow.

However, Konami has solved these problems by making this version highly playable, and with improvements in the audio and video departments, and new challenges. *Castlevania II* is certainly worth checking out...

As fun as Capcom's *Rockman World*. *Nemesis II* again,



•The Game Boy gets two great games - *Castlevania* and *Nemesis*

features some superb animation sequences, lots of varied enemy attacks, and generally tougher than before. As shoot-'em ups go, it's certainly one of the best on the Game Boy and a must if you're a fan! ■

Onn Lee

CHECK OUT ALL THE OTHER SPECIALIST COLUMNS IN NEW COMPUTER EXPRESS

• AMIGA • PC • ST • TECH TIPS  
• PD COLUMN • GAMES WEEK

PLUS THE HOTTEST REVIEWS AND FEATURES EVERY WEEK

## Don't buy a High Resolution Monitor

until you've checked out **The Monulator**, an incredible new software utility which turns **any** TV or colour monitor into a genuine mono monitor capable of displaying **every single pixel** of the ST's superb High Resolution screen.

**Run the wealth of ST monochrome software, using your existing TV or monitor, with no loss of display quality!**

All ST professionals agree that a high resolution monitor is essential for serious use. The Monulator is a direct replacement for the Atari SM124 monitor in a complete, easy-to-use package. No special hardware is required. What's more, The Monulator has features the SM124 can only dream of (for example, a green screen mode!)

Compatible with: Calamus... Cubase... Proflight... Calligrapher... Signum... Dynacad... Hyperpaint... WERCS... Degas Elite... Steinberg Pro24... Word-up... DevpacST... QuickST... BeckerCAD... MegaPaint... The list goes on...

The Monulator is also compatible with the entire Atari ST range, from the 520 STFM to the Mega STE!

### Attention Users of PD/Shareware Mono Emulators

Does your current mono emulator run slower than a soporific snail?

Are you fed up with having to decide everything at boot-up?

Can your eyes take much more of the fuzzy icons and unreadable text?

**MORIARTY SOFTWARE has the answer: THE MONULATOR!**

The price? Look through this magazine and you won't find an SM124 monitor for less than £120. A software monitor comes a little cheaper. The complete Monulator package, including documentation, postage and FREE Technical Support, costs just £19.95 (Overseas add £1)

Available direct from MORIARTY SOFTWARE,  
1 CEDAR CLOSE • LANGLEY GREEN • CRAWLEY  
WEST SUSSEX RH11 7SB • Tel: (0293) 539215.



Credit card orders to Goodmans International on (0782) 335650.  
For further information please send a decent-sized SAE.

ST Format rated 87% Latest release now Version 1.8

## Don't buy a High Resolution Monitor

until you've checked out **The Monulator**, an incredible new software utility which turns **any** TV or colour monitor into a genuine mono monitor capable of displaying **every single pixel** of the ST's superb High Resolution screen.

**Run the wealth of ST monochrome software, using your existing TV or monitor, with no loss of display quality!**

All ST professionals agree that a high resolution monitor is essential for serious use. The Monulator is a direct replacement for the Atari SM124 monitor in a complete, easy-to-use package. No special hardware is required. What's more, The Monulator has features the SM124 can only dream of (for example, a green screen mode!)

Compatible with: Calamus... Cubase... Proflight... Calligrapher... Signum... Dynacad... Hyperpaint... WERCS... Degas Elite... Steinberg Pro24... Word-up... DevpacST... QuickST... BeckerCAD... MegaPaint... The list goes on...

The Monulator is also compatible with the entire Atari ST range, from the 520 STFM to the Mega STE!

### Attention Users of PD/Shareware Mono Emulators

Does your current mono emulator run slower than a soporific snail?

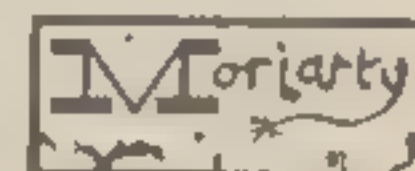
Are you fed up with having to decide everything at boot-up?

Can your eyes take much more of the fuzzy icons and unreadable text?

**MORIARTY SOFTWARE has the answer: THE MONULATOR!**

The price? Look through this magazine and you won't find an SM124 monitor for less than £120. A software monitor comes a little cheaper. The complete Monulator package, including documentation, postage and FREE Technical Support, costs just £19.95 (Overseas add £1)

Available direct from MORIARTY SOFTWARE,  
1 CEDAR CLOSE • LANGLEY GREEN • CRAWLEY  
WEST SUSSEX RH11 7SB • Tel: (0293) 539215.



Credit card orders to Goodmans International on (0782) 335650.  
For further information please send a decent-sized SAE.

ST Format rated 87% Latest release now Version 1.8



# EXPRESS SALES

## ◆ ST

● **WILL** sell Sega Megadrive with joypad + powerbase converter + 4 games, Golden Axe, Budokan etc. Worth £300, sell for £189. Phone Andrew on (0732) 455943. Also will add on extra games perhaps.

● **ATARI 520STE**, good condition, approximately 50 disks, dust cover, disk box, joysticks etc. Tel 081 428 3664 after 7pm. Also wanted, manual for Epson LX800 printer. Will buy or borrow for copying.

● **ATARI ST** with one meg drive, and plenty of disks, £170 o.n.o. Also Terminal with monitor and keyboard, sell for £35 Commodore PSU offers. Contacts also wanted, for all details ring Michael at Sheffield. 0742 570196.

● **ATARI ST**, one meg drive, plenty of software, all leads etc, offers around £170. Contacts wanted write to Michael, 57 Knutton Crescent, Sheffield, 5 Commodore PSU's for sale or why ring Sheffield 570196

● **WANTED!** ST disk magazine creation programme! Must be able to show Degas, Neo pictures. If you can help, write to, Martin Betts, 5 Hempstead Mews, Lakeview Park, Chapel Break, Bowthorpe, Norwich, Norfolk, NR5 9NL. It's urgent!

### ★ 1Mb STFM ★

D/S drive, mouse, etc, with £400 of software including Speedball 2, Midwinter. Sell for £280 o.n.o.  
Phone David after 6pm (05512) 2778

● **ATARI STFM**, three joysticks and loads of software and add-ons. Very good condition. All for £199 o.n.o. Plus Star SR10 printer worth £200, for you £40. Phone Adam 0932 243186. Walton on Thames

● **ATARI ST** 1/2 meg external drive, £60, plus Epson MX80 9 Pin DMP full working order. £60. Tel Newquay 0637 850117.

● **ST ORIGINALS**, Italy 90, GFA Basic V2, many more £10 each. Magazines and cover disks, half price, ST Format, ST Action, The One, Zero, ST/Amiga Format. Also 520STFM. Good condition, £200 to secure. Phone 0563 40129 after 6pm.

● **THE COMPILATION DISK** for Atari ST/STE, the best compilation available, includes accessories, Dbase, Llamatron, Neochrome Master and more. For disk, send £2 payable to Gregor McLachlan, 63 Hillview Drive, Clarkston, Glasgow, G76 7JQ or SAE for details

● **ATARI ST** 4Mb RAM internal drive plus Star LC200 colour printer and software still boxed as new £550 o.v.n.o. Phone 0705 825163. Joystick, mouse and paper included.

● **MEGA ST**, 2.5Mb RAM, complete with SM124 mono monitor and SM1224 colour monitor, sound expander board fitted, some software, excellent condition. £765 o.n.o. Contact Jim on 021 474 3050 (evenings).

● **SPECTRE GCR**, £300. Reflex Graphics card, £200, Vidi ST, plus Vidi RGB, £85. Multiface, £20 Blitz, £10. Daatascan A4 £400. Phone after 6 or weekends. Paul, Derby (0332) 41630.

● **16 BIT** Sega Megadrive including all leads and joypad. JAP version, £90, also external disk drive for ST. £40. Phone 0889 583057 ask for Wayne.

● **CZ2305** casio keyboard, fully midi compatible 1000's of sounds, 100 voices, 20 rhythms memory etc. Wonderful instruments, boxed as new £75. (49 keys) Tel Woking (0483) 764657

● **HARD DISK ATARI SH205** 20 meg plus PD software. £215. Seagate ST238R, 20 meg hard drive for use with host adaptor. £79. Compilation, £8. Speedball 2, £10. Tel- 0277 (Brentwood), 226621

● **ATARI 520STFM** with DS/FDD, 512K RAM, manuals, magazines, serious, books, disks, etc. Worth £1200+. Sell for £300 o.v.n.o. Tel (0582) 607150 after 4pm and ask for Michael

● **ATARI ST** games for sale, Batman, Strider, Toobin, Rick Dangerous. All boxed originals, £5 each. Triad Vol 2, £10. Speedball without box, £3. Tel 0773 747987 or the lot for £25.

● **JENNIX PD** (over 600 Atari titles) prices from £1, superb cat-disk, easy use. Call Nick (evenings) on 0634 723659

● **ATARI 520 STFM** for sale, 1 meg drive, 512K RAM. House, games, PD, leads all for £180. Call Nick (eves) on 0634 723659

● **ATARI ST PD** software. Nearly 600 titles available. Prices from 90p. For your copy of our custom written catalogue disk, send 50p to Klee, Jennix PD, 66 Abbey Road, Strood, Kent, ME2 3QB

● **ATARI 1040 STFM**, SM124 mono monitor, 14" colour portable monitor, external drive, business software, games, disks and box, joystick £495. Call Chris on 0285 821543 (Will separate).

● **HARD DRIVE** 42 meg cased PSU etc. ready to run, supra software 2400 backed clock included, £280. Supra 2400 modem as new unused, boxed. £100. Phone after 6pm. 058283 3411

● **WANTED ST** contacts to swap PD and programming hints and tips. 100% reply to all. Write to William Carmill, 1 School Road, Rathfield, Co. Down, Northern Ireland, BT34 5QA.

● **UPGRADE** your 520 STE to one meg. Two 256K Simms for sale. £23 including fitting instructions p+p. Phone 0268 543180

● **ATARI 520STFM**, 1 meg colour monitor, mouse, joystick, software, magazines, disks. All boxed, m condition. Andy 0893 543775 (eves)

● **LATTICE C** version 5 plus K and R book on Ansil C, £60. Condition as new. Phone Leicester (0533) 665874

● **MULTISYNC MONITOR**, Sony "Trinitron", super VGA/EGA/CGA, 0.26 Dot, similar NEC 3D/Taxan 770+ only better. Brand new, never used £350. Tel 081668 6077 Croydon.

● **AMIGA OWNERS**: There has been a new group of PD libraries formed called "Real PD", which means that this library follows a set of instructions to have 100% quality service. To join, ask member for form. Tel (0529) 303351.

● **DEVPAK 2** Ver 2.14 machine code assembler/disassembler cost £59.99. Will sell for £30 including p+p and recorded delivery. Data! serial lead, £5. Also PD swappers wanted. Tel Tim (0283) 65797 (after 6pm on weekdays).

● **TWO AMIGA DTV** books, £12 inc postage. Paul 0332 41630 after 6.30 PS that's £12 for both, not £12 each.

## SOUTH Lincs PD

**SPECIAL OFFER 65P PER DISK**. Large selection of Amiga PD including Games, Graphics, Animation, Utilities, Music, Demos etc. T-BAG 1-54. Below is a small selection of titles available.

1005 Drip	4078 Master Virus Killer 2.1
1038 Jetman	4070 Amibase 3.76
1050 Pipeline	5002 Lumberjack song (2 disks)
1054 Ballonacy	5020 C64 Tunes
2020 Ghost Pool (1 Meg)	5036 Pink Floyd The Wall
2021 The Run (1 Meg)	6042 Budbrain 2
2055 Iraq Demo	6043 Alcatraz Megademo 4 (3 disks)
2076 Bad Bird (1 Meg)	6050 Wings Demo

Send SAE for list of titles or 50p for catalogue disk.

Please add 50p for P&P to all orders.

Cheques/postal orders made payable to South Lincs PD.

10 Linden Rise, Bourne, Lincs, PE10 9TD.

Tel: 0778 393470

● **ATARI 520STFM** 1 meg drive, loads of games, demos, magazines etc, together with mouse and joystick. All in good condition, only £199 o.n.o. or exchange for anything Atari Lynx related. Phone Trevor after 6 on 0438 742998

● **ATARI 520STE**, 1 meg memory upgrade, all manuals, mouse, basic language disk, 1 meg drive, all cables inc Panasonic KXP1180 9Pin Dot-Matrix printer and cable. Sell for £520 o.n.o. For more information call 081 681 1940 after 7.30pm.

● **ATARI 520STFM**, good condition, single sided internal disk drive. Joystick, mouse, some games etc. All for £170. Phone 0733 79112 after 4pm

● **ATARI STFM**, 1 meg RAM, 2 disk drives, Philips colour monitor, over £800 worth of software, books, magazines and accessories, only £450 o.n.o. Phone Shane on (0638) 665194 after 6pm.

● **A500**, meg, 2nd drive, hardware copier, joystick, spare power pack, computer desk, three books, software, disk box, magazines, disks, cost over £1000 asking £600. Buyer collects. Tel: (0325) 465711

● **AMIGA A500** version 1.3 1/2 meg upgrade, external drive, colour television Serial cable, joystick, £400 of software including Shadow Of The Beast, Falcon UMS II, Devpac II, Deluxe Paint book £450. Phone (0395) 273386.

● **AMIGA 500** 1 Meg memory, second disk drive, AT Once PC Emulator, plenty of games, plus Kindwords, also IBM boot disks available £600 o.n.o. Telephone Ashley (02302) 4986 home or (0234) 224308 work (Bedford area)

● **AMIGA 500** half meg upgrade, A590 20 meg hard drive, loads of software, manuals, modulator. £500. Ring Tom on 08642 677632 between 5-11pm. Please o.n.o. Will sell separate.

● **AMIGA** software, Monster Pack Of Infestation, Shadow Of The Beast, Nitro, £8. Oblitus and i-shirt, £9. Oblitus, £7. Awesome, £6. Menace, £3. Atomino, £7. Armour Gaddon, £10. Tel. 0245 352538 Norman. Also manual for basic etc.

### ★ ADE'S PD LIBRARY ★

PD for 50p. Send disk and s.a.e. for free demo comp.  
15 Deanes Close, Dovercourt, Essex, CO12 4JH.

● **AT-ONCE AT** Emulator for sale. Good condition. Brilliant for all PC software on the Amiga. Ring James soon for bargain at £150 o.n.o. on (0730) 64145. No longer needed. Also DMP 4000 printer £70 o.n.o.

● **WANTED** Amiga hard drive, also public domain for sale, over 1200 disks at 69p per disk. Send £1 for list on disk to Chris, Stanwell Close, Wincobank, Sheffield, S9 1P2 or Tel 0742 422000

## AMIGA PD

Latest titles  
99p per disk

Phone, write or call in for list.

## FREEWAY AMIGA PD

4 Tarmount Lane,  
Shoreham, Sussex,  
BN43 6DA  
Phone 0273 440491

● **ATARI 520STFM**, 1 meg disk drive, Rainbow TOS. Bought this year, includes all Discovery Pack software, manuals, mouse and mat, dust cover, joystick and games. Original packaging. Phone (0256) 29553. Perfect condition. Basingstoke in Hampshire only £200

● **TRIANGLE** Elite double sided external drive, with built in track counter. First £120 will secure. Ideal for all your disk backup needs. Citizen 1200 printer, not working. Good DIY job. £55 o.n.o. Phone 0563 40129

● **ATARI 520STFM**, TOS 1.09, double sided internal drive. Good condition. Runs all ST software. Some software provided. Also magazines plus cover disks, ST/Amiga Format, ST Format, Zero, The One, ST Action, sell cheap. Phone 0563 40129 after 6pm.

### ★ MONITOR AND GAMES ★

Philips CM8833 excellent condition, hardly used, £150. Games good selection £50 the lot.  
Tel Alan (after 7 pm) 0203 33-3334

● **ATARI 520STFM**, 20+ original games, mouse and joystick. All manuals, everything mint condition. Offers around £200. Dave 091 4301719.

● **ATARI STFM** one meg drive, two joysticks, mouse, 70 games, utilities, good condition. Sell for £220 o.n.o. or swap for PAL Famicom with games. Phone Steve on 091 5810364 after 5pm.

● **ST PD LIBRARY** for sale. Approximately 150 DS disks, £1 each. Send three first class stamps for disk catalogue. All programs catalogued individually. A Woods, 34 Millingford Avenue, Golborne, Warrington, Cheshire, WA3 3XF. Tel 0942 715377.

● **SIGNUM 2**, £80. Word Up by Neocrypt. £40. TOS 1.4 ROM set (six chips), £40. Abacus books (ST) various. Phone for details from £8. Tel 0322 662747 ask for Pete

● **SUPERCHARGER** stand alone computer for PC Emulation and Multi Tasking on ST. MS-DOS 4.01, £195. Tel: 041 5548662. Buyer collects.

● **ST GAME** contacts. Adventure/strategy prefer. Please write to Robert, 177 Chiselhurst Road, Pettis Wood, Kent, BR6 0DU.

● **ATARI ST** 520 games for sale. Carrier Command, Star Wars, Robocop, Roy Of The Rovers, Leviathan Rocket Ranger, Sapians Mission, Genocide Voyager. Please ring for details. 0942 711951.

● **BATMAN CAPED CRUSADER**, Atari ST disk. New/unwanted: welcome any small sensible offer (SAE enquiries). Letter replies only sorry no phone calls. Charles Trager, 7 Grantley Street, Glasgow, Scotland, G41 3PT.

● **1040STE** with Star LC10 printer, mouse, mat, joysticks, latest games, w/p's, d/b's, art packages, spread sheet, DTP, STAC and various PD disks. All boxed and under warranty, accept offers of around £400. Contact Matt (0494) Chesham 783203

● **1040 STFM**, £190. Cumana 1Mb drive, £45. Timeworks DTP, £35. First World Pus, £30. Gods, £12. Elite, £8. Populous, £8. Xenon, £5 or £290 the lot. Prices o.n.o. All good condition. (0449) 612167 (Suffolk).

● **'EMPIRE'** for the ST needed urgently if you have it and want to sell it. Phone 081 693 9661 please.

● **ST GAMES**, originals for sale. £5, re Mig 29 Fulcrum. Phone Steve on 091 251 2542 Whitley Bay, Tyne And Wear.

## ◆ AMIGA

● **AMIGA A501** Ram clock expansion £20, Amiga Basic Inside and Out, plus disk £10. Amiga Transformer, PC Emulator, complete with instruction manual £10. Phone Paul Bolton (0204) 55105

● **A590** 20 meg hard disk, fully populated with 2 meg of memory, good working order, £275 o.n.o. Tel: (0272) 644934 (Bristol).

● **AMIGA 500**, 2Mb RAM, 2nd drive, Star LC10 printer, books, games, blank disks, joystick, stereo lead, version 1.3, six months old. £580. Tel: Richard (0271) 865690.

● **AMIGA 500** +1/2 meg upgrade, Cumana 3.5" drive, A590 hard drive + lots of software, mouse, joystick. All less than 6 months old. £600. Call (0553) 769914 after 5pm.

## RAGNAROK SYSTEMS

31, RIVERSIDE  
EGHAM SURREY  
TW20 0AD.

286/16 COLOUR VGA PC.....	£2689
386SX/16 COLOUR VGA PC.....	£2785
386/25 COLOUR VGA PC.....	£2940

3.5" BULK DISKS	
20x .....	38p ea
50x .....	37p ea
100x .....	35p ea

AMIGA A500 BASE PACK	£295.00
AMIGA A500 CARTOON CLASSICS	£349.99
AMIGA A500 CLASS OF THE 90's	£429.00
ATARI 520 ST-FM DISCOVERY	£262.99
ATARI 520 ST-E DISCOVERY XTRA	£289.99
ATARI 1040 ST-E FAMILY CURRICULUM	£349.99
SEGA MEGADRIVE	£117.99
SEGA GAMEGEAR	£92.99

- JOYSTICKS
- MICE
- PRINTERS
- RIBBONS
- CABLES
- UPGRADES

SOFTWARE -- PC, ATARI, AMIGA UPTO 30% OFF RRP

0784 435568

ALL PRICES INCLUDE VAT & DELIVERY



# EXPRESS SALES

● **AMIGA A500** 3Mb + 2nd drive, + sound sampler + sound blaster + software, inc D-Paint, Fanta Vision, KSpread, Superbase, Personal + games and PD. £550. Phone 0264 365784 after six. Ask for David.

● **WANTED** Amiga 500, must include power pack, modulator and mouse, pay around £140. For details, Richard Barton, 11 Charles Avenue, Southport, Merseyside, PR8 3ET or phone 0704 74172 evenings.

● **AMIGA PD** 50p, catalogue disk 75p. Programmes required for library in return for payment. SAE to J. Daniels, 13 Churton Road, Rhyl, Clwyd, LL18 3NB, or tel 0745 343044.

## ★ AMIGA CLEAROUT ★

Digiview 4, Vidi-Amiga complete, KCS PC board, PD library private collection 900+ disks, all open to offers, swaps etc. Phone (0903) 210279

● **AMIGA A590** 1/2 meg memory upgrade Cumana disk drive, Naksha and Commodore mice, mouse mat, four player adaptor, joystick, Deluxe Paint II, 40 games, Work Bench, TV modulator. Phone 0734 423449. Anytime £600 o.n.o.

● **FOR SALE** (or swap) 3Mb (1Mb Chip) A500, 60Mb A590, extra drive + other stuff, swap for a B2000 with 40Mb HD. Phone Neil Mcrae on 031 463 6274. Between 7pm and 9pm. Monday - Friday

● **SAMPLER** for Amiga, boxed includes hardware and software, good condition, I will sell for £15. Phone (0705) 582729. Ask for Marcus after 6pm.

● **MASTER SOUND** sampler, still under guarantee. £20 Roland D-5 Midi Synth Multi Timbral with sampled drums. £350. 0623 861158.

● **ALSO** CDL 5 meg RAM 20 meg hard disk, Fatter Agnus, £850. Lots of extras. Tel: 0253 724607 (Blackpool).

● **FATTER AGNUS**, £40. 1/2 meg, £20. Cheat disks. £3. Second hand software. £3+. Cheque/P.O./SAE 0742 438542. J. S. Smith, 45 Maplecroft Crescent, Sheffield, S9 1DN.

● **SUPRA** 8Mb RAM card for A1500/2000 populated to 2Mb. New boxed guaranteed. £145 inc. Telephone Danny 0692 402927.

● **AMIGA 500**, memory expansion, 2nd drive, Star LC24-10 24Pin printer, 80+ disks. All usual extras (mouse, joystick etc.) Good condition. Prices to sell at £485 or may split. Phone 0883 717946 after 6pm.

● **REAL TIME** colour digitiser, framestore and genlock. The quality 'Superpic' by JCL Business Systems. Cost £500 now, sell for £250. Amiga 1081 colour monitor, similar to Philips 8853, but mono sound. £115. Mike, evenings. Leicester 855306

● **AMIGA PD** 99p a disk inc P+R. Also PD swaps welcome. Mega drive carts gameboy, Lynx carts wanted and for sale. Freeway PD, 4 Tarmount Lane, Shoreham, Sussex, BNH 3 6DA. Phone 0273 440491.

● **AMIGA SOFTWARE**: Propage v2, £95. Photon Paint 2, £10. Personal Accounts Plus, £15. Home Accounts, £10. Abacus book. Amiga disk drives inside and out, £15. Phone Richard 0372 277887 (Surrey).

## ◆ PC

● **AMSTRAD PC3086** 3.5" twin disk drives, b+w monitor, 3.3 MS/DOS new model, excellent condition. £475 o.n.o., also deskmate package on 5.25" disks with manual suitable for any IBM compatible model. £40. Tel 0922 33183.

● **AMSTRAD PPC 640D** portable twin drive, includes mains adaptor, modem, case, manuals, Sage review 3 and other software. £330. Offer considered. Phone 0308 862426 (evenings). Ask for Robin

● **WANTED** CPC664 computer body for special project. Write giving price required to Mr J. A. Stokes, 7 Ryles Crescent, Macclesfield, SK11 8DD. Tight budget.

● **BBC B-PLUS** 64K, with extra Roms, (view word processor), (DFS), Epson printer, monitor and double Cumana disk drive + monitor stand. £300 the lot. Can deliver in South West area. Phone 0932 343701.

## ★ ROM SHAREWARE ★

10,000 PC titles to choose from. Prices from £1.50!! Call for free catalogue disk. 0292 671638 8pm-10pm.

● **C64** almost new, with joystick and 10 games for sale. £100. Also Atari 2600 console with 10 games for £25. Phone Andrew on Dartford (0322) 383277 anytime between 10-8pm.

● **AMSTRAD DMP 3160** printer, £50. MP2 Modulator, £25. Cheetah Mach 1 joystick, £8. Amstrad JY2 joystick £5. Devpac 80 assembler, £18. CRL Image System, £8. 30 tape games, £25. Phone Philip 061 652 7565

● **DATA SWITCH BOX**, turn one Serial Port into two, with cables, £25. Atari 800XL, faulty, only £10. Commodore 16 + data recorder, adaptor, leads, £25. Phone 021 777 8808.

# PICTUREWARE

"Incredibly Awesome".....Amiga User International ©N.J.N. Williams 1991  
"Extraordinarily high quality...impressively clear images.".....Amiga Shopper  
"Digitization of the pictures is very impressive".....New Computer Express

People Disks 1&2,	Only £3.50 Each for 5+ Disks	Hippos Disks 1&2
Children Disks 1&2		Castles Disks 1&2
Motorbikes Disks 1-4,	4 Disks £16:00	Tall Ships Disks 1-3
The Nude Disks 1,2&3,	2 Disks £9:00	Aeroplanes Disks 1&2
African Famine Disks 1&2	1 Disk £4:99	World Wildlife Disks 1-5
African Animals Disks 1&2,	Includes VAT & Postage	Cuddley Toys Disks 1&2
Silverback Gorilla Disks 1&2,		Hothouse Plants Disks 1-3
Views of Vietnam Disks 1&2,		Compilation Set Disks 1&2
Edwardian Photos Disks 1&2		Marinas & Boats Disks 1&2
Art In Photography Disks 1&2		Rocky Coastlines Disks 1&2
FilmCrew on Location Disks 1&2		Beautiful Sunsets Disks 1&2
		Household Objects Disks 1&2

Orders by post to: Nik Williams Broadcast, Dept NCE, Aspect House, 21 Brynmill Crescent, Brynmill, Swansea, SA2 0AL. Orders normally dispatched same day 24Hr Credit Card Phone/FAX Hotline 0792 645946

(When ordering by telephone please wait for FAX tone to finish, at which point you'll be connected to our telephone system.)

Visa, Access  
Cheques P.O's  
No cash please  
ONLY AVAILABLE FROM  
**NIK WILLIAMS BROADCAST**  
0792 470503

● **AMIGA A500** cartoon classics (1 meg) complete plus extra software (originals) which won't run on B2000! Manuals etc. All boxed, three weeks old, £300. Must be a bargain! Phone 0823 338009 anytime, but please hurry! Broker!

## ★ SHIELDSOFT PD ★

Now only 50p per disk. Your programs wanted. Catalogue disk 75p SAE to 13 Churton Road, Rhyl, Clwyd LL18 3JHB

● **FOR SALE** A590 hard drive populated with 1/2 meg RAM. Full of public domain, music modules and loads of non commercial software, boxed as new, only 2 months old. £200. Phone 0761 232235 and ask for Chris.

● **FOR SALE**: New original Amiga software and Amiga Syncro Express III, genuine reason for sale. Tel (0702) 294383, or write: Seamus Slater, "Capri", George Street, Shoeburyness, Essex, S63 9AB. Very new games. Quick sale wanted.

● **AMIGA B2000** plus AT Bridge Board, 40Mb HD 3Mb RAM, 2x31/2" drives plus 51/4" PC drive, hand scanner and parallel switch box. Offers around £1100. Contact Tony on 0582 21673

● **£100** for best printer offered, send sample printouts for fast reply also page setter DTP manual wanted. Also Kspread, two manuals wanted, also any basic Clip Art, b+w only. Paula, 3 Moordend Avenue, Chelmsleywood, Birmingham, B37 5SD.

● **SUPERPIC** colour frame grabber/genlock for Amiga computers, upgraded model, willing to take Digiview + camera/stand etc in part exchange. Perfect condition as new with box, software + leads. £350 o.n.o. 081 467 5800.

● **A590** 20 meg hard drive for sale. As new, 6 months old. Quick sale needed to pay for B2000 hardcard. Phone David, 0709 586741 5pm to 9pm or weekend with offers around £180. Deliver in S. Yorkshire.

● **CBM AMIGA A500** with half meg upgrade, and over £1200 worth of games, demos, magazines, inc Turbo Challenge, Indy 500, Xenon 2, Rainbow Islands. Sell for £405, offers welcome. Tel 021 447 7005. All mint condition.

● **CBM AMIGA A500** with half meg upgrade, and over £1200 worth of games, demos, magazines, inc Turbo Challenge, Indy 500, Xenon 2, Rainbow Islands. Sell for £405, offers welcome. Tel 021 447 7005. All mint condition

## PC SHAREWARE

Over 9000 US/UK based programs at only £2.35 inc VAT per Disk. Adventure, Card, Arcade, Board Games, Spread Sheets, D Base, W/Processors, Graphics, Animation and lots more. Send £1.00 for Catalogue Disk stating 5 1/2" or 3 1/2" payable to:

## COMPUTER GAMES SHOP

UNIT 1, CENTRAL MARKET, SCARLOTS LANE, NEWPORT, ISLE OF WIGHT PO301JD TEL: 0983 821222

● **AMIGA A500** 10845 stereo monitor, extra disk drive, joystick, disk boxes, over 150 disks containing utilities, games and basically any applications, too many to mention. Worth new. £1300. Absolute bargain at £500, no offers. Reading 0734 566487.

● **AMIGA SOFTWARE**, Monkey Island, £15. Prince Of Persia, £15. Manchester United Europe plus Boxing Manager, £17. (Jet). Cyberball, £10. M1 Tank Platoon, £13. Conqueror, £10. Dragons Breath, £10. Emlyn Hughes Soccer, £10. All boxed originals. Telephone 021 427 7431.

● **WIN 365 AMIGA PD** disks! Send for free PD catalogue and you will be entered in to our draw. We sell the cheapest PD anywhere in the universe! Contact Perspective PD, 11 Clover Close, Cumnor Hill, Oxford, OX2 9JH.

● **RECEIVE AMIGA PD** before anyone else! Perspective PD have contacts in Holland, Germany, Australia and The U.K. See the newest demos from all over the world! Contact Perspective PD, 6 Clover Close, Cumnor Hill, Oxford, OX2 9JH.

● **VIDI AMIGA** Digitiser with Vidi Chrome and Scart lead worth £120. Sell for £50 or £80 with ten Amiga originals games and two joysticks, hardly used and immaculate condition. Phone Mark on 0509 844166 after 5pm.

● **AMIGA A500** plus 1/2Mb EXP, 2 x joysticks, external floppy disk drive, over £600 of top software, inc Speedball 2, Fatcat, Sim City, Populous, many more, all original boxes. £599 Tel: 06267 74795.

● **AMIGA 2000** + 1.5Mb 48Mb hard drive, 10Mb PD and shareware, boxes, leads, manuals, plus some commercial software. £1150 o.n.o. Ask for Justin on 081 332 0960 after 7pm.

● **MAXX CONTROL** yoke for the Amiga perfect for Flight Simulator, £45 o.n.o. Also jet instrument trainer fully customisable. Boeing 727 Sim for practising instrument flying rare item, £50 o.n.o. Phone Steve Windsor. (0753) 864382.

● **DR BUTCHER** is back. Wanting Amiga contacts. Send lists to Station House, Llanelli Hill, Waunavon, Near Abergavenny, Gwent, NP7 0PU.

● **CBM A500** 1 meg upgrade, CM8833 Philips monitor, lots of software and accessories. Cumana extra drive. £500 the lot. Phone 0322 863656.

## ★ AMIGA 40Mb HARD DISK ★

with 2Mb RAM, £350.  
AT Once PC emulator and  
5.25" external disk drive, £140.  
Tel: Eddie 051-727 1426

Cumana A500 external drive - the best! £39

STE SIMMS 1meg £30 1/2meg £17

3.5" Disks 880k GUARANTEED error free 31p

A500 upgrades 1/2 meg £22 with clock £27

ENTERPRISE DISKS LTD

9 EAST SILVERMILLS LANE EDINBURGH EH3 5BG

Please add £2.90p p&tp per order. Same day dispatch

● **AMIGA PD** exchange. Would you like free software? Then send SAE to Paul, 2 Poltiko Terrace, Penryn, Cornwall, TR10 8PL

● **ORIGINAL** Amiga software, hardware, books, magazines, SAE for lists. Chris, 3 Albion Terrace, Letcham Road, Litcham, Kings Lynn, Norfolk, PE32 2QQ

● **AMIGA** 1Mb, 2 mice, joystick, much software, books, magazines, leads, 60 disks, £300 o.n.o. Phone Mark. 650493 Buyer collects S. Wales.

● **DIGIVIEW GOLD** v4.0. £60. Fifty blue DS/DD 3.5" disks. £20. Write to: Paul Strong, 20 Coolgardie Road, Ashford, Middlesex, TW15 1ES.

● **PODSCAT** Graphics Tablet, boxed with Stylus, pen and Aprodaw Amiga software was £255, accept £140 o.n.o. Rob after 6pm. 0277 260587.

● **AMIGA SOFTWARE** Team Yankee, £8. Life And Death, £8. 3D construction set, £20. All mint. unregistered. Tel Paul 0925 573908 (Warrington).

● **AMIGA 2000**, 2nd floppy, WB1.3, 10845 monitor, D-Paint 3, Digipaint 3, books, magazines + miscellaneous, other software. £650. Buyer collects. Tel: 081 748 6008.

● **AMSTRAD CPC6128** computer with colour monitor, plus over £200 of games software, bargain at only £300 complete o.n.o. Also many extras unable to list please write for details to Jonathan Hawkins 155/2 RAF Halton, Aylesbury, Bucks, HP22 5PG.

● **SPECTRUM +3/2A** printer cable, only £4. Atarist II for Spectrum +2, just £5. Roll of approximately 200 tractor feed disk, labels £5. Phone Peter on 031 441 7952.

● **ATARI XL/XE**: Loads of original cassette games for sale from 50p, write or phone for list. Jason Wheelhouse, 10 Sandwith Road, Todwick, Sheffield, S31 0JP. (0909 771707).

● **+3 DISK UTILITIES**: Dice v3.0, £6. DMS V1.1, £6. +3 diary +database, £6. SP7 tape to disk £6.50. Game Hackers 1, £6 all: on disk, originals, latest version, inc p+p, extensive manuals, less than half price D.B.2, £6. See Kobrahsoft adds in most Speccy magazines. (£24 the lot). Tel Robert 081 770 3687

● **SPECTRUM 48K** in Sega keyboard, leads, PSU and manual with VTY modem, a bargain at only, £63. Phone Trevor Speight on 0942 42314 (office day) or 061 790 5865 after 6.30pm.

## COMPUTERS

For probably the best prices and deals on Home and Business Computers, Acorn, Archimedes, Atari ST's, Lynx, Commodore 64's, Amiga's, Amstrad, Star, Citizen, Canon, Panasonic, Sega Consoles, Goldstar Plus printers, disk drives, monitors, memory upgrades and accessories etc. Great deals on PC's

\* FAX M/C's \* ANSWER M/C's \* PHONES \*  
Joysticks from £4.99 Blank disks 5.25", 3 1/2" 3"

## SGM ELECTRONICS

19 Charles Street, Wigan, Lancs, WN1 2BP  
Tel: (0942) 321435 Fax: (0942) 821273

Mon-Thurs 11.00am - 9.00pm

Fri - Sat 11.00am - 7.00pm or later

Repairs to most makes of computers





# EXPRESS SALES

- **C64 contributor** needed for a new C64 Fanzine anything considered send articles to: C. C. Wilson, 13 Estreham Road, Streatham, London, SW16 5NT. All contributors will be rewarded.
- **AMSTRAD CPC 6128**, colour monitor, Speech synthesizer, Light Pen, over £400 worth of software. All for £300. Contact Michael Joy 2 Edinburgh Close, Greenmeadow, Cwmbran, Gwent, NP44 5HR. Phone (06333) 66134
- **WANTED** dead or alive! Your old Archimedes computer. Modern Day Bounty Hunter. Has listful dollars, will collect. (0332) 830140

- **CHEAP PC games** Links £25 Lemmings, £10 All originals, send SAE for full list to: Desilva, Flat 2, 75 Cedar Road, Sutton, Surrey, S2 5DJ
- **AMSTRAD PPC 6400** 3.5" drives modem 640K RAM 2CD display, carry case Dos 3. Tel. Robert 0292 265278 £200
- **WANTED** 286 3.5", 5.25" and hard drive, VGA mono monitor, 1 megabyte for student, will pay £400. James (0202) 529364
- **IBM XT**, colour CGA, 640K RAM, 10Mb hard disk, 5.25 disk. £235. Upminster, Essex, 04022 50753.

- **SPECTRUM +2**, PSU, manuals, over 100 pounds worth games, joystick, £100 the lot. Phone after 8pm. (0227) 720598.
- **MASTER 41** 5 1/4 inch disk drive good condition Commodore 64 and/or cassette deck, Star NL10 printer C64, action replay cartridge. Offers please for any bits. Tel: 0689 823688.
- **MGT** Sam 256K disk drive, new Rom, many games. £120 boxed as new. Also breaking 520STFM for spares semi working. Tel. (0509) 267926
- **WANTED** for C64: Alter ego, Little Computer People (disk), infocom disk adventure, paradroid, project Firestart, Ultima 4, Ultimas, Wasteland, Laser Genius (disk/cart), Zzap issues 1-13. Write to Simon Stokes, 46 Vallay Road, Northallerton, North Yorkshire, DL6 1HY.
- **CM664** under warranty 1541 disk drive printer interface, 2 datasets, all manuals. Best sensible offer secures. Write G.S.D., 40 Grafton Road, Harwich, CO12 3BD.
- **WANTED** Philips NMS58245 MSX2 computer, complete with all disks. Manuals and cables. Must be in good condition. Please send details to L. Spencer, 4 Argyle Street, Radford, Nottingham, NG7 3JX.

- **FOR SALE** to fit CPC464 Silican disk, £75. 256K memory expansion, £55. 6128 Rom, £30. Phone 0983 882197.
- **AMSTRAD CPC464** colour monitor with software, magazines and desk. £160. Buyer collects. Phone (0282) 862610.
- **C64+4** boxed games, joystick, dataset etc, also C64 bits, dataset adaptor, joysticks. Offer or exchange + cash. BBC Master, Collin 0704 533397
- **PET 8032** computer complete with MPP1351 D Matrix printer, CBM8050, dual disk drive. £50. Tel. (0202) 531926 days. Bob or Mark.
- **FOR SALE** Commodore 16+ with cassette, over 18 full working games, 3 basic starter tapes, manual, magazine worth over £100. Sell for around £30. £45. Offers available.
- **WANTED** 48K Spectrum and 31/2" DSDD disk drive with interface, please write to K Snowdon, 6 Glebe Terrace, Dunston, Gateshead, Tyne And Wear, NE11 9NQ.
- **SPECTRUM +**, excellent condition, still in box, portable television, 2 data recorders, over £1000's worth of software, Light Pen, worth over £500. Will sell for £200. Phone 0908 643189. Ask for Andrew.

**P.O.V.**

Compacted demos from Europe's top demo packers. Latest releases from POV plus other ATARI ST pd at realistic prices. Only £1.50 per disk.

Send £1 for disk catalogue to:

**TOWER PD. PO BOX 40.**  
**THORNTON-CLEVELEYS, BLACKPOOL**  
**LANCASHIRE. FY5 3PH.**

- **ANYBODY** want back issues of PC Leisure (1-6). Send large envelope with appropriate postage to Raymond U., 52 Garndon Way, Oxtun, Birkenhead, Wirral, L43 2NP. Also PC games for sale. £3 to £5. Send SAE for list.
- **WANTED**, manuals, books, help and advice on using an RM Nimbus PC2 with twin 3.5" floppies running MS-DOS 3.10. Anything appreciated inc very cheap serious software and hardware add-ons. Phone Garry (0455) 840454.
- **RADCON AIR TRAFFIC** control Simulator, like Tracon with a military flavour, £20 o.n.o. Also ATP, Air Transport, Flight Simulator, 5 different aircraft types, £25 o.n.o. Phone Steve Windsor (0753) 864382.
- **CLIP ART** library for IBM compatible P/C's 1MG Format, free print outs with every clip art disk. Catalogue and sample disk, £1.50. (refundable) Image Art, 19 Brenda Road, Tooting Bel, London, SW17 7DD.
- **DOS 3.30** and 4.10 original manuals, £15 each. Games Centurion and Rev 78, IBM. £4 each Tel woking (0483) 764857.
- **AMSTRAD** 3 1/2 inch disk boxes for sale, all empty around 580 £40 o.n.o. Buyer collects or pays postage. Ring 0536 416274.
- **AMSTRAD PC COMPUTER** 2086D 30 meg HD 2 x 3 1/2" floppies mono VGA monitor keyboard, mouse, Windows manual Very good condition £625 o.n.o. 0462 684995
- **OLIVETTI** Prodest PC1, 20Mb hard drive, 3.5" floppy, colour monitor + expansion box £400. Call Joe on (0268) 527320 evenings and weekends only.
- **COMMODORE CLT 286** notebook 286 with PC with 20 meg hard drive and 1 meg RAM only £950 o.n.o. Phone 0582 769152 eves/weekends
- **EPSON AX 286** PC 640K 20 meg portable plus Kodak portable printer, mint and boxed Manuals genuine bargain £750 Telephone 081 5711 494.
- **BBC** model B computer with Cumana 40-80 disk drive, plus lots of games. Good working order. £150 Telephone 091 4874245
- **WANTED** PC penpals, male and female overseas welcome. Send details to L Richardson, Little Paddocks, Landulph, Saltash, Cornwall, PL12 6ND
- **WONDERLAND** from Virgin games on nine 5 1/4" disks. Boxed as new. Cost £35 Sell for £15 inc postage. Call Warren on (0424) 712633 evenings.

## Reach 400 Express readers for £1!

Advertise in this space and reach the 25,000-plus most active computer users in Britain for as little as £61!

To find out more how Express can help you sell more, call Charlie Nicholls on 0225 442244 right now

**SAM COUPE AND SPECTRUM MAGAZINE!**

PROGRAMS, UTILITIES, INFO, IDEAS! NEWS, REVIEWS AND HOMEGROWN SOFTWARE MONTHLY SINCE 1987!

**"OUTLET"** AND HELP PAGES, SERIOUS SOFTWARE

SPECIAL OFFER! Latest issue £2.50 to newcomers on:- +3, DISCIPLE/+D, MICRODRIVE, OPUS, TAPE, SAM DISC

**CHEZRON SOFTWARE, 605 LOUGHBOROUGH RD., BIRSTALL, LEICESTER LE4 4NJ**

- **CPC-HGH**, with green screen, plus modulator, £150 + games. All boxed, worth £400+. Accept, £170 o.n.o. 29 dixon Lane, Wortley, Leeds. (Peter).
- **PC HACKERS PACK** 100's of unprotects virus kit assembler/disassembler copier disk tools etc, only £15 for 11 full 5 1/4" disks, plus £1 p+p. 37 Devon Place, Newport, Gwent, NP9 4NW. Tel: 0533 259847. Not for piracy.
- **PC SHAREWARE/PD** £1 disk +p+p. 2000Mb available. Top titles: choose programs to fill disk. Send 2 first class stamps for easy menu driven catalogue disk to: 37 devon Place, Newport, Gwent, NP9 4NW. Tel: 0633 259847.
- **A REG** Toyota Celica the game, the real thing. £1500 o.n.o. or swap for the right 386 PC. Phone 0225 333789 after 7pm Don't miss this great opportunity.
- **TDK 3.5"** 1.44Mb HD floppy disks. £8. For buy of 10. All new unopened. Ring Adam on 0908 220495.
- **FLOPPY** disk drive. 3.5" high density for IBM Compatibles with fixing kit, only £40. In p+p. Ring Adam on 0908 220495.
- **CITIZEN 720K** internal 3 1/2" disk drive new + sealed, low power 5 volt, 1/3 height 82TRKS double sided Ideal for PC's, Amstrads, Laptops, Atari's Beebs, Archies and many more. £35 each or 2 for £60, includes postage. (0495) 272092.
- **WANTED** Archimedes computer any condition will collect. Also need reasonably priced lazer printer. Telephone 0332 830140. For instant cash.
- **STEVE AND JACKIES** BBS 2GB of files for down loading 50000+ messages in 50+ forms. Phone 0703 650037 free guest access.
- **COMPAQ** portable 286 (luggable) 640K RAM, 20Mb hard disk, two 5.25 inch disk drives, five expansion slots. £550 o.n.o. Phone 0689 849244 Croydon.
- **TOSHIBA T5100** portable computer, 386DX processor, 2Mb RAM, 40Mb hard disk, Gas Plasma Display, internal 2400 baud modem. £1650 o.n.o. Phone 0689 849244 Croydon.

## 8-BIT

- **BBC** ■ Issue 7, Walford ROM/RAM board, dual 40/80T disk drive, RGB monitor, view, logo, basic editor, £235 Caernarfon (0286) 3887.
- **CBM 128D** including colour monitor, printer, cables, serious software and games £200 o.n.o. Also MPS1230 printer. £60
- **BBC B 32K** home computer, few disks, external Cumana disk drive Shift lock key missing, hence only. £75 Dave 091 4301719.
- **8-BIT** Atari stuff wanted Cheap, broken, swap etc Graham Whittle, 37 Westfield Road, Bilston, West Midlands, WV14 6EW
- **AMSTRAD 6128** plus Multiface games inc Turrican Rainbow 1, Strider, 2 joysticks, books, 30+40 magazines £380 Phone (0732) 057671.
- **AMSTRAD CPC464** computer, ND1-1 3" disk drive, some software, books, many magazines. Cost £450+. Sell £210. Tel: 0244 375836
- **GEOPUBLISH DTP** package for Commodore 64/128 latest version, unused plus Geos 1.3 £18 p+p included. Also Neos, Commodore Geos, mouse with cheese graphics software and mouse driver for Geos. Mint condition. £18 p+p included. (0625) 827033.
- **DD-1** disk drive with interface for CPC 464 with some software eg Rainbow Islands, Storm Lord, blank disks, disk box, manuals, all excellent condition a great bargain £70. Tel 0480 61253 Hunlindon. Multiface 2. £20. 9/9/91.
- **ATARI 130XE** 1050 disk drive, Touch Tablet, mouse, joystick, word processor, Movie Maker and much more. £100. Call 081 291 4094.
- **AMSTRAD CPC6128** with colour monitor, cassette recorder, dust covers, joystick, cassette/disk software, magazines. Excellent condition. £250. Tel: (0925) 72 4876.

- **RE-RUN** user group, for all 8-bit computer owners. Send SAE for details to: Re-Run, 1 Northholme Close, Grays, Essex, RM16 2NX.
- **FREE!** Helpline for CPC range. No problem too small Write to Chris, 6 Frank Street, Great Horton, Bradford, BD7 3BT. Enclose SAE.
- **FLEET STREET** Editor Publishing little used. £20 Tel 0457 763817.
- **MAXAM II** Macro Assembler CPC/PCW not used. £20. Tel: 0457 763817.
- **AMX** mouse, Desktop Publishing for CPC (disk), little used. £40. Tel: 0457 763817
- **BBC B** with colour monitor, twin 80 track disk drives, twin joysticks, extension Rom socket, manuals. £200. Also 7 years Acorn user. Magazine, excellent condition. £40. Phone 0908 664536.
- **EXCELLENT** condition Spectrum +3, ideal for young enthusiast, very nice condition with mouse and various extras, only £180 Phone 0605 49339 (David).
- **COMMODORE 64**, 2 datacassettes, power pack, 100+ games, Robocop, F-16, Strider II, Hot Red, Golden Axe, Rainbow Islands, manual. Tel: 0926 422001. £160 o.n.o.

- **MIDI INTERFACE** for CPC 6128, sequencer software. £50. Amstrad CP/M assembly language manual. £4 plus other books. Tel 0202 571410.
- **CPC 464** colour monitor with joystick, 30 games, excellent condition and has not been used much, gone off computers. £150 o.n.o. Tel: (0621) 741634
- **COMMODORE 64**, cassette recorder, mouse, joystick art package and games. Excellent condition, bargain at £100. will separate. Tel: 0454 316263.
- **AMSTRAD** computer user, 30 issues between Feb 99 to June 91. Also Amstrad Action Nos 52,54, 55, 56, 58-70, includes cover tapes. £10. Amstrad Action £25. ACU o.n.o. Write to: J. Blackham, 5 Turnstone, New Barn, Longfield, Kent, DA3 7NR.
- **ELECTRON** hardware for sale, send SAE to Darren, 38 Camrose Walk, ST Dials, Cwmbran, Gwent, NP44 4NN. Phone 0633 871742 evenings only.
- **SPECTRUM +3** for sale, Light Gun, mouse, Paint Package, Tas Spell, Tas Write, Multiface, utilities, games. Phone for list, two joystick interfaces for spectrum. Also Akai video for sale. Top of range. Phone Steve 0782 612393.

SEPTEMBER BARGAIN PRICES THAT CANNOT BE MISSED

- AMSTRAD 3" DISK DRIVES, these are cased and with lead and own power supply, bargain September price only £35.00
- AMSTRAD 3.5" DISK DRIVES, these are again cased and with lead, September price of these £35.00
- AMSTRAD PSU 13.5v at 1.9A encased and with leads and output plug only £6.00
- EPSON 3.5" and 5.25" disk drives, these are double sided, double density but uncased but do come with makers handbook. Price £39.50.
- 110 WATT ASTEC PSU, 230v mains operated, outputs of 38v 2.5A and 5v 3A, September price £6.00.

Please add £3.00 postage and package to your order.

**M&B ELECTRICAL SUPPLIES LTD.**  
 12 Boundary Rd, Hove, Sussex, BN3 4EH.  
 Tel: 0273 430380 Fax: 0273 410142. Telephone orders welcome



# EXPRESS SALES

## PRINTERS

- **AMIGA** compatible printer wanted, must be cheap (around £60). Condition not important, just as long as it works. (0323) 26790
- **STAR LC10** b+w printer for sale, includes stand, ribbons and paper, excellent condition, boxed with manuals. £100. Ring Andy 091 385 2216

- **PANASONIC KXP 1124** 24 Pin printer, boxed. Two ribbons. £160. Atari mouse, unused. £15. Tel: 081 422 9099.
- **STAR LC10** colour 9 Pin printer with cable 1 year old, very good condition, selling upgrade to laser printer £140 needed. Contact Matt Drakard at Milton Keynes. 0908 670816 after 6.30pm or leave message anytime
- **STAR LC32-200** (mono) printer 24 Pin. Seldom used, include new ribbon and Parallel cable, owner emigrating. Phone Gan (0934) 391552 evenings.

## COMPUTER REPAIRS

☆ FREE ESTIMATES ☆

All makes & models repaired and serviced - including printers & monitors  
For further details call

**Hawkwell Electronics,**  
Southend-on-Sea. 0702 207593 (24 hrs)  
Amstrad registered repair centre

- **FREE!** Colour printer when you buy my Amiga (one meg) and monitor. Over 250 disks, Cumana drive, two nice and joysticks, magazines, games, manuals. £650 o.n.o. Buyer collects. (0246) 200031

- **LQ3500** printer, boxed. Good condition, hardly used. Bargain offer, only £150. Also original Amstrad disks cassettes, many titles. Separate prices or whole lot, very reasonable. Phone evenings/weekends. 0245 491827

- **FOR SALE** Amstrad 2160 printer, any demo £50 o.n. Bedale 0677 423540.

- **STAR LC10** colour printer with ribbons etc + colour ribbon, great condition and with printer stand. Quick sale. £175. Call Dave on 051 428 2280

- **CITIZEN** Swift 24 Pin printer, plus 4 ribbons and cable, £199, includes postage and packing. Tel: 0909 771707

- **9 PIN** Dot Matrix printer, NLO, graphics, Serial and Parallel interfaces, suits most computers. Lead made for £60 o.n.o. Good quality print, suits most computers. Phone 0425 754816 after 6pm

- **CITIZEN** Swift 24 Pin printer, Dot Matrix ribbon Inc, 4 black ribbons, plus canonics. £200 includes postage. Tel: 0909 771707.

## MONITORS

- **VGA** mono monitor, 13" as new condition. £45 +p+p. Sell colour plus VGA monitor, as new condition. £115 +p+p. Lotus 123 version 2.1 complete £80 +p+p. (0322) 662747.

- **WANTED** faulty Atari, Hi-Res mono monitor, dud tube, might do it price is right. Can collect. 30 miles. Brighton. 0273 416004. Call Ernie

- **WANTED** CTM 644 colour screen will exchange for GT 65 green screen plus tape, or cash. Carl, 16 Hellside, Penyford, Chester. 0244 544498.

## MODEMS

- **HELP WANTED** with using Comm. I have problems downloading Archived files, books on Amiga Dos and Comms wanted. Swap my Akai video for good modem, or part exchange for fax machine, hard drive. Steve 0782 612393.

- **DESIGNER** modem v21/23, auto answer, call monitor, also contains lead and software with use on Amiga A500. £50. 081 805 7749 evenings

## CONSOLES

- **ATARI Lynx** being sold by a completely mad person who only wants £110 for the lot. Includes PSU Comlynx, three games, headphones and two sets of batteries plus recharger. Phone Peter on (0733) 233314. Quick sale needed

- **MEGADRIVE GAMES** for sale. Thunder Force II and Alex Kid, £20 each. Batman, Hangan and Battle Squadron, £25 each or swap Famicom. Final Flight and Mario, £35 each or swap, offers welcome. Tel: 0773 747987.

- **HAND HELD** PC Engine GT +II top games. £300 or swap for Amiga or Famicom games + cash or offers. Tel: 0773 747987

- **PAL** super Famicom, + games, (good sound PAL version). As new, mint condition, only £180. Also remote control car, new £55. Write to: R. K., 4B Currents Lane, Harwich Essex, CO12 3DE

- **SEGA** Game Gear with Shinobi, Mickey Mouse and mains adaptor £100. Phone Steve 0892 662698.

- **PC ENGINE** (Scart). Joystick, six games, £110 o.n.o. Also colour monitor, £150. Tel: 0922 404023 between 5pm and 8pm

- **SEGA MEGADRIVE**, Philips 8833 colour monitor, second joystick, six games £250. Cash only Tel: Nick 0695 31765. Lanes

- **SEGA GAMEGEAR** with Mickey Mouse and Shinobi, only £100. Phone Steve 0892 662698.

- **WANTED** Atari version VC52600 cartridges, and Lynx or game gear cash waiting for all the above. Telephone 0630 658329 after 5pm.

- **LYNX** (white) PSU, California games, (boxed). £50. also Rygar, Zaxxon Mercenary, Road Blasters, £15 each. Phone Paul (0474) 872777.

- **GAMEGEAR** + Shinobi + power supply, less than two months old, used once. £90. Tel: 081 647 7355 evenings only. Ask for Adam.

- **NINTENDO** Nes system plus over 100 great games and Jap U.S converter. A genuine bargain at only £190. Phone Jon 0702 354264 anytime.

- **INTELEVISION** owner wants to swap games. Dave 0322 229822 Dartford or Surrounding area.

- **WANTED** Megadrive carts, also Gameboy needed. Phone 061 790 0655.

## VIDEO GAME CENTRE

870 Wimborne Road, Bournemouth, BH9 2DR

### MEGADRIVE

Spiderman	36.99
Fantasia	36.99
Sonic Hedgehog	34.99
Ice Hockey	39.99
Outrun	34.99
Wardner	29.99
Phantasy Star III	49.99
688 Sub Attack	39.99
Dinoland	34.99
Alien Storm	34.99
Streets of Race	34.99
Turkman	39.99
Road Rash	39.99

### GAMEBOY

Bill & Teds	24.99
Castlemania II	24.99
Nemesis II	24.99
Burger Time	24.99
The Punisher	24.99
Navy Seals	24.99
Mickey Mouse	24.99
Parodius	24.99
Princess Blobette	24.99
Duck Tales	24.99
Ninja Warriors	14.99
Dragons Lair	17.99
Rolans Curse	17.99

### LYNX

Lynx II	89.99
A.P.B.	28.99
Paciland	28.99
Warbirds	28.99
Ninja Gaiden	28.99
Chess	28.99
Blackout	28.99
Blue Lightning	19.99
Klax	24.99
Rygar	24.99
Roadblasters	24.99
Pouch	12.99
Kit Case	16.99

Please send S.A.E. for full list of games. (Closed Mondays)

TEL/FAX: 0202 527314

VISA

## WIN A 286 PC

Yes your own 286 VGA PC Compatible with mouse, keyboard, VGA monitor, hard drive + software

**DIAL 0839 36 36 37**

ALL CALLS CHARGED AT 36/48p PER MIN CBS NW6 6RG

## AT LAST ITS HERE!!!

THE UK'S  
FIRST PAY  
SYSTEM

THE PINPOINT BBS WITH DIRECT

TEL: 0839 363600

LINKS TO  
THE USA

Access to over 20 Gigabytes

ALL CALLS CHARGED AT 36/48p PER MIN CBS NW6 6RG

- **STFM 520**, 1 meg upgrade, SMM804 printer, ext drive, colour monitor, approx 150 disks. £400 o.n.o. Call after 6pm. Tel: 081 5231923.

- **MICRO** peripherals MP165 9 Pin printer with manual. Hardly used, bargain at £89. 041 554 8662. Buyer collects.

- **STAR LC10**, boxed, unused, only £110. Also Panasonic KX-P1124, in excellent condition. £200. Telephone. (081) 503 2521.

- **CITIZEN** Swift, 24 colour printer with 1000 sheets of continuous paper, 5 months old, used once, boxed. For quick sale. £220 o.n.o. Tel: 0257 481301.

- **COMMODORE MPS1230** sleek, compact printer ideal for ST/Amiga/C64. Boxed, leads. Slight fault with printer head but good readable printout and screen dumps. Only £89 or exchange for Daisy-Wheel. Phone Shokat. 031 447 7215 after 7pm.

- **JAPANESE MEGADRIVE** (PAL) with 4 games, power supply, lead, loose £110 ono. Also Amiga A500 boxed, excellent condition four months old. Extended warranty till 7/3/94 with games, joystick, etc £330. Tel 081 691 7456 after 6pm Kimwen.

- **STAR LC32-200** (mono) printer 24 Pin. Seldom used, include new ribbon and Parallel cable, owner emigrating. Phone Gan (0934) 391552 evenings.

- **MIRACOM** Miracle WS-3000, V22 Bis modem. For use with, ST, Amiga, PC etc. £350 as new, I'll sell it for £200. So phone Ben on (021) 704 4603. Comms software supplied. The modems in good condition.

- **DOWTY** Quattro modem SB2422 v21 v22 v22Bis immaculate condition, with Comms software for Amiga only. £135 o.n.o. Phone Danny 0582 604082.

### \* MODEM 2400 + 9600 BAUD \*

£200 o.v.n.o. Digiview, Vidi Amiga, RGB Split, Panasonic 650 CCTV camera, Sculpt 3DXL. All for sale.  
Phone Ian evenings (0978) 861301

- **INFORMATION** wanted, modems, hard drive, just general help. On disk or listings. (Amiga). Steve, 26 Reeve Road, Holy Port, Mladenhead, Berkshire, SL6 2LS.

### \* COURIER HST \*

(American model)  
with transformer, PSU, UK phone plug, manual. First caller gets it for just £350.  
Dave 081-661 1057

## SOFTWARE

- **AMIGA** sampler Mastersound only £20. Also complete D.T.P. package, Publishers Choice including pagesetter and keywords. £50. Tel: 0623 881158

- **WANTED** expert cartridges software version 4.1 and last version of expert utility disk for C64. Tel: Steve 0253 852208 (Blackpool) evenings.

- **AMIGA** software, Speedball 2, £8. F-19 Stealth Fighter, £12. Kick Off 2, £8. Shadow Warriors, £6. Pro-Tennis Tour 2 £10. Ring Falsalon. (0422) 369918

- **AMIGA** boxed originals. Toruak, Hammerfist, Beat 2, Rainbow Islands, Dragon Ninja, X-Out, P47 Ninja, Rabbits Menace £25 the lot! 0784 (Staines) 458034

- **WANTED:** War/strategy games for 1040STE. Lists, 80 Stratford Road, Salisbury, Wiltshire, SP1 3JS. Tel: 0702 329329 T. Milzen.

- **AMIGA** RPG's, Eye Of the beholder, Champions Of Krynn, Curse Of Azure Bonds. £12 each. Phone Paul on 091 2818903.

On-line

A breakthrough in MULTI-PLAYER entertainment  
Got a modem - Join instantly!  
Playing now,

the award-winning adult space fantasy **FEDERATION II**  
Flying now the Multiplayer 3D combat flight simulator **AIR WARRIOR**.  
COMING SOON....The original, the legendary, the classic **MUD**  
**FREE** Membership as a special introductory offer.  
**LOG ON NOW TO FIND OUT MORE CALL 081-539 6763**  
642a Lea Bridge Road London E10 6AP

- **FAMICOM** (monitor) and Megadrive Scart for sale. Will part exchange. Offers? Nicky Lee, 20 Fairway, Risborough, Bucks, HP17 9DH. 08444 2859 evenings

- **PC GT HAND HELD**. Works with PC Engine cards, including 4 games. Outrun Shinobi, Batman, Powerdrift, worth £350+, only £200 o.n.o. Tel: (0593) 873844. ask for Rob!

- **SUPER FAMICOM**, PAL version, game, F-Zero (good PAL version, won't blow-up), only £180. Write to RK, 4B Currents Lane, Harwich Essex, CO12 3DE.

- **NINTENDO** compatible system with 190 games. £230. Phone Steve, 0892 662698.

- **25 AMIGA**, boxed and original games for SAE, new titles, amongst those. SAE E. Dale, 9 Bedford Street, Scarborough, North Yorkshire, YO11 1DB.

- **ALL** your old C64 disks software wanted anything bought, send details and how much you want for it to Zeons Lair, 4 Garden Close, Penrith, Cumbria, CA11 7LD. No pirated stuff please!

- **ABSOLUTE BEGINNER** wants cheap C-64 software on disk. Contacts badly wanted to get passion going! 41 Spingmill Street, Bradford, BD5 7EE

- **ARCHMEDES** original software and games for sale at reduced price. Ring 0706 817570 for



● **ARCHIEDES** original software and games for sale at reduced price. Ring 0706 817570 for details.

● **AMIGA** games, swaps. Gods, Golden Axe, Champions, Kyrin, Amos F19, Team Yankee, Super Monaco. Phone Nick on Cheltenham. 0242 582471

● **NEO GEO** carts for sale, Majician Lord and Baseball Stars both £50 each. Quick sale needed. Call BTN (0273) 775291

## ★ ALL FORMAT ★

monthly sales/wants/exchanges/hints 'n' tips lists S.A.E. for details  
**National Home Computer User Group,**  
10 Harrington Road, Stockwood, Bristol,  
BS14 8LD

● **FOR SALE** Spectrum games from £1 to £150, including Double Dragon, Road Runner and others. Contact Robert Davies on (0705) 695266 for details.

● **C64** tape software, 21 tapes in all, only £15. Winter games, gold collection, F15 Kennedy Approach etc. All good software. Bargain only £15. Contact Paul (0934) 510081

● **AMIGA** games: Elvira, Turrican 2, Megatraveller 1, F19 Stealth Fighter, Murder, Eye of the Beholder and others. All £10 each. Write: Ann, 27 Costain Grove, Norton, Stockton, Cleveland, TS20 1JW.

● **AMIGA** games: Hero Quest, Colonel's Bequest, Their Finest Hour, Operation Stealth, Loom. £10 each. Write: Ann, 27 Costain Grove, Norton, Stockton, TS20 1JW.

● **FOR SALE:** Amos The Creator with extras disk v1.2 no registration card. £20 o.n.o. Write: Ann, 27 Costain Grove, Norton, Stockton, TS20 1JW.

● **PC SHAREWARE/PD** £1 disk +p+p 2000Mb available. Top titles. Choose programs to fill disk. Send 3 first class stamps for easy menu driven catalogue disk to: 37 Devon Place, Newport, Gwent, NP9 4NW. Tel: 0633 259847

● **PC HACKERS PACK**, 100's of unprotects virus kit assembler/disassembler copier disk tools etc, only £15 for 11 full 5 1/4" disks, plus £1 p+p. 37 Devon Place, Newport, Gwent, NP9 4NW. Tel: 0633 259847. Not for piracy.

● **AMIGA** game to swap Simpsons, Eye Of The Beholder, Buck Rogers, Warlords, Gods, Leisure Suit Larry 3. Phone Nick 0242 582471.

● **ORIGINAL** Amiga and CBM 64 software for sale. Phone 0908 660453 for details. Some hardware also for sale. Ask for Paul.

## Upgraded from C64 to PC or AMIGA?

- Use your old C64 printer
- Read your old disks

Our interface cable and software connects C64 peripherals to any IBM PC Compatible or Amiga except the A1000 - Attached via parallel printer port.

- Use MPS, DPS, VIC, Star, Brother, Seikosha and Citizen printers
- Epson graphics output on dot-matrix printers
- C64 Not required
- 1541 file transfer program
- Fully MS-DOS/AmigaDos compatible

Standard "Ami-64-Link" £35.25 "CBM-PC-Link" £35.25 (State disk size)  
Budget "Ami-64-Link" £23.50 Prices include VAT and delivery

\* Budget locks Amiga during printing, no performance lost with Standard



**York Electronic Research (0904) 610722**  
The Paddocks, Jockey Lane, Huntington, York YO3 9NE



## DISCOVER THE WORLD OF DISCOVERY PUBLIC DOMAIN SPECIALISTS

**DISCOVERY,**  
108 The Avenue,  
Clayton, Bradford,  
W. Yorks BD14 6SJ

24HR TELEPHONE  
HOTLINE  
**0274 880066**

WE HAVE OVER 1,200 P.D. DISKS IN OUR LIBRARY  
HERE IS A SMALL SELECTION

**DEMO'S**  
D10/21 - Red Sector mega demo (2)  
D14/15 - Predators Mega demo (2)  
D24/25 - New Tek Demo Reel 3 (2)

**MUSIC**  
M4 - Popeye Meets The Beach Boys  
M15 - D-Mob III  
M30/31/32 - Oc The Bartman\* (2)

**ANIMATIONS**  
A8 - Walker anim\*

A10 - Puggs in Space  
A30 - Miller Lite Advert

### ACCESSORIES

3 1/2" D5DD 5K Pack + labels £4.50  
3 1/2" D5DD 5K Pack + labels £17.50  
40 Capacity 3 1/2" disk box £4.99  
80 Capacity 3 1/2" disk box £5.99  
Mouse Mat £1.99  
Zipstick Autofire joystick £13.50

### ALSO

Fred Fish 1-520  
T-Bag 1-49

### CATALOGUE DISK ONLY 50P

\* **SPECIAL OPENING OFFER** \*  
10 PD disks, mouse pocket, mouse  
mat, 10 cap. disk box and  
catalogue disk **ONLY £11.99**

\* = 1 MEG REQUIRED  
(2) = SECOND DRIVE REQUIRED

### WHY BUY FROM US?

We offer a fast and very friendly service to all our customers.  
All disks are virus free. Stocks always held.  
Same day despatch. No minimum order.  
Trade enquiries always welcome.

### HOW TO ORDER:-

1-9 DISKS £1.25 ea. 10+ DISKS £0.99 ea  
DELIVERY:- UK £0.60, per order  
Europe £1.20 per order, World £1.80 per order.  
Cheques & P.O.'s payable to "Discovery"  
**FREE CATALOGUE DISK WITH EVERY FIRST ORDER**

● **WANTED** Battlechess, Psion Chess, Chessmaster 2000 for ST £5 each paid. Details only to: 285 Acton Lane, London W4 5DH

● **ATARI STE/FM** Public Domain software and some commercial (serious titles) for sale. Call (eves) 0634 723659 for details, prices etc.

● **C64** disk software, cash book, Image System, Screen FX (Awesome), Jetuz (Sublogic). All good condition, only. £35 o.n.o. will haggle! Contact Paul (0934) 510081. Weston-Super-Mare. All must go!

● **WANTED** GFA Draft v.3 C.A.D. for atari ST. Ring John 0388 528012 after 4.30 (Durham).

## ◆ OTHER

● **WANTED** colour VGA monitor, must be good condition and reasonable price. 14" size. Also wanted cheap Dot Matrix printer. Tel 0273 728930 after 6.30pm on week days.

● **PSION ORGANISER** model LZ. 16K Rampak, leather case and PSU, £140, no offers. Just weeks old. Nick on 0634 723658 only evenings.

● **SWAP CANON** A-1 camera with 50mm lens. Also 210mm, 200m Macro lens X2 converter plus Vivitar 200m flash! All the kit for your Xerox or compatible inkjet to suit the Amiga. Tel 0386 446012 for details.

### ★ SY77 OWNERS ★

get 64 fantastic new sounds for only £10 (inc disk). These original sounds include guitars, drums, effects, weird and splits. Send cheques/P.O.'s to:  
**Paul Michalak, 4 School Lane, Chase Terrace, Nr. Walsall, Staffs, WS7 8LD.**

● **GOLD MOUNTAIN GMT** 1650 metal detector with head phones and hand book, cost £299, used once only will swap for Atari STE in like condition. Phone 0483 722482

● **HELP!** Can anyone lease help me to translate a printer German manual. Willing to swap PD etc in exchange. Please phone (0533) 823089 7pm to 10pm only.

● **STE 256K** Slims only, £7 each or all four for only £20, also curriculum pack software (new) only £30 the lot. Phone (0533) 823089 7pm to 10pm only.

● **LOTS OF OLD** Speccy gear, books, software at 50p. Send SAE for list of goodies. 50 Foxhwa, Coulby, Newham, Middlesbrough, Cleveland, TS9 0RU. Wanted any Amiga Clip Art, swap you disk for disk, for sale Amiga disk drive. £50.

★ **YAMAHA YPR-20 MIDISYSTEM** ★  
with stand, unused Christmas present, boxed as new, was £330 now at £200  
Call Nick (0608) 882656

● **ATARI PORTFOLIO** 128K RAM card for sale! £65 or nearest offer! Phone 0905 4295995, and ask for Matt.

● **DELAYS POSSIBLE!** If you have sent for details of any re-run products information has been held up. Sorry for any inconvenience.

● **DESK TOP** publishing small office system monitor, two disk drives, printer, MQP, Locoscript, Spell, File, Microdesign, only £290. Phone office 0623 441357, home 0623 517698.

● **ROLAND D.5** multi Timbral Synth ideal for use with sequencer, still under guarantee, hundreds of sounds, plus over 64 sampled drums. £350. Casio midi guitar (Strat type), mint condition. £199. Phone anytime. 0623 861158.

● **ROLAND D.5** Multi Timbral Synth with sampled drums etc. All you need for making professional music with a midi sequencer. £350, only six months old. 0623 861158.

# How to place an advert - for free!

## ★ New! With! And! Plus! Also! Featuring! Etcetera! ★

Did you know you can now attract the attention of Britain's 25,000 most active home computer users with a boxed out ad? That's right! Just £5 buys you two weeks' space in a box very like this one (though note that the limit's 20 words). Simply fill in the form below, remembering to enclose a cheque for £5 made out to Future Publishing Ltd. Couldn't be easier!

Send your cheque for a fiver to: **Shopping Express Reader Ads,**  
30 Monmouth St, Bath BA1 2BW

■ IF you wish YOUR advert to appear in a box like the one on the left (and how could you not?), THEN simply TICK this box and **ENCLOSE** a postal order/cheque for £5 made out to Future Publishing Ltd with your advert. **NOTE:** random use of WORDS in CAPITALS is NOT compulsory. And here comes that box mentioned above. Any minute. Here it is...

Write your advertisement very clearly indeed in the grid below, one word per box:


Tick the category you wish your advertisement to appear in:

- |                                |                                |                                   |                                   |                                 |
|--------------------------------|--------------------------------|-----------------------------------|-----------------------------------|---------------------------------|
| <input type="checkbox"/> ST    | <input type="checkbox"/> PC    | <input type="checkbox"/> Printer  | <input type="checkbox"/> Software | <input type="checkbox"/> Modems |
| <input type="checkbox"/> Amiga | <input type="checkbox"/> 8-bit | <input type="checkbox"/> Monitors | <input type="checkbox"/> Consoles | <input type="checkbox"/> Other  |

## Those terms and conditions in full...

- Sorry, absolutely no trade ads under any circumstances (please call Siobhan Kennedy-Coyne on 0225 442244 if you would like to place a display trade ad in this section)
- We cannot vouch for the quality of goods or services offered in this section. All ads are accepted in good faith
- We reserve the right to amend or refuse reader ads at our discretion
- Don't offer pirated software through these columns, if you value your liberty: FAST is watching!
- We can't guarantee reader ads will appear in particular issues of Express - but we'll try
- Ads appear for two consecutive issues
- Please sign the following declaration, which constitutes acceptance of the above terms and conditions:  
My advertisement conforms to the terms above and is legal, decent, honest and truthful

Signed.....

Send your reader ads to:  
**Shopping Express Reader Ads**  
30 Monmouth St, Bath BA1 2BW

■ Please make cheques for boxed out ads payable to Future Publishing Ltd



## TECH TIPS



## TECH TIPS

Does your text lose its style when it's transferred? Does your printer crash your machine? Want to know how to keep your programs secret? Read on...



## Format failure

I think there is something wrong with my Amstrad 1640HD's floppy disk. The computer seems to work fine, but when I use FORMAT to prepare a disk, it comes up "Command or filename not found". What can I do?

Jonathan Kegg, Plymouth

**THERE'S NOTHING WRONG** with your floppy disk, Jonathan, and the problem is easily fixed.

The key to the problem is that not all MS-DOS's commands are built into MS-DOS itself; there are too many of them and they would take up too much memory in the PC. Instead some of the less common commands are stored on disk, effectively as programs.

FORMAT is one of these, and is in fact a program on your hard disk called FORMAT.COM. Your problem is that when you type FORMAT MS-DOS can't find the FORMAT.COM program. This is because it is almost certainly stored in a directory on your hard disk called "DOS" or something similar, while you are typing FORMAT while in another directory.

There are two ways around this. The direct method is to include the full "path" of the FORMAT command – the path is the exact position of the program on your hard disk. Thus, if FORMAT.COM is in the DOS directory typing:

```
\\DOS\\FORMAT A:
```

will do the trick. The more elegant solution, however, is to instruct MS-DOS to always check in the \\DOS directory to see if the command you want is in there. This is done using the PATH command. You use this command by typing PATH followed by a list of directories to search, each separated by semicolons. So the command you want will be:

```
PATH C:\\DOS
```

assuming again that the directory with the MS-DOS files is called DOS.

Ideally you should work out a list of the directories you always want MS-DOS to search and put the appropriate command in your AUTOEXEC.BAT file so it is activated every time you switch the machine on



## No mouse hole

I want to fit a mouse to my Tandon PC, but unlike my friend's Amstrad, there's no socket marked mouse. Does this mean I have to fit an expansion card?

Paul Kaye, Huddersfield

**YOU SHOULDN'T NEED** an extra card. Most mice work by attaching to the serial port (labelled SER or COM on the PC). As long as you don't need that port for a modem or other device, you'll be OK.

And most PCs these days come with two serial ports (COM1 and COM2) anyway. If you do need an extra serial port (you can have up to four if you need them), an expansion card will cost only £15 or so – check the ads in *Shopping Express*.



## Terminal emulation

I have heard vague mutterings about being able to attach a terminal to the serial port of an Amiga for debugging purposes, but never any details. Is this indeed possible and, if so, is there any software that can be used to run a terminal under normal, that is 'non crash', circumstances?

Thinking somewhat laterally to this, is there any way that I could use my old, but oh so loved, Speccie 128 as such a terminal? It has an RS232 port (of sorts) on its side and I guess this would be the means of physically connecting the two computers.

Given this, can you recommend anywhere where I could get a Spectrum RS232 to Amiga serial port cable made up?

Finally, are there any terminal emulation software available for the Spectrum that would be suitable for these purposes?

I would be very interested to read your ideas, comments, howls of laughter on the above.

Nicholas Murray, London

**YES, IT IS POSSIBLE.** The software to do this is held in the Amiga's ROM, and is really only of use for debugging purposes. For more general terminal emulation, just about any comms package you care to mention will suffice. I would recommend the public domain program NComm, on Fish Disk 356.

I'm sure you could use your Spectrum as a terminal. As far as getting an RS232 cable made up, Trilogic (telephone 0274 691115) is probably the best firm to approach. I'm afraid I don't know of any terminal software for the Spectrum. I suggest you keep your eyes open for some comms software.



## Text transfer

I've been struggling to get text with formatting like tabs and centring out of my word processor and into my DTP package. I could do it fine as raw text, but the DTP system doesn't read Works' WPS files.

Then I discovered 'RTF'. By using the Convert option in Works I can change my Works files into

RTF ones and the DTP program reads them no problems at all, with all the formatting intact!

Guy Burtles, London E4

**YOU CAN ALSO USE RTF** (which stands for Rich Text Format) for moving files between word processors. And it's extremely handy for shifting files by modem, or between different types of machine, as all the formatting is stored as text, not tricky binary files.



## Vanishing disks

I need help, and fast. I bought a new Amiga 500 a few months ago, having graduated from the C64. I bought the software package Quartet two and a half months ago, and found that the sample disk was empty. The whole package was returned to Microdeal, who replaced it immediately with a new one.

In the last two months I have received five sample disks, all empty. I received the fifth one yesterday. The program disk is full and loads without problems. Microdeal is sending the disks out with samples on them, but when I receive them they are empty. Does the problem lie with the Post Office, and is anyone else having the same trouble?

Mrs F Fuller, London

**RATHER A STRANGE ONE, THIS.** It may be that the Post Office has been X-raying the disks and so blanking them, but this seems unlikely, especially since your program disk is intact.

The only other possibility that comes to mind is that the samples are there, but you haven't been able to find them. As you know, most programs and items of data on the Amiga appear as icons. However, it is possible to save things on the disk without icons, therefore making them invisible from the Workbench. The way to check is to open the Shell (click on the Shell icon on the Workbench disk) and type:

```
dir ?
```

The computer will respond with 'DIR, OPT/K, ALL/S, DIR/S, FILES/S, INTER/S:'

At this point, remove your Workbench disk and put in your samples disk. Then press [Return]. You will get a list of all of the files on the disk. If it really is empty, then I suggest you start making a fuss with Microdeal. Otherwise, you should



## GA blues

I'm completely confused by all the acronyms for graphics on the PC. I've seen VGA, CGA, EGA, and in PC Format this month they mention XGA. Please explain what they mean.

Peter Foot, Berkhamsted

**WELL FIRST OFF**, XGA doesn't exist, which probably explains some of your confusion; it's probably a misprint for XGA. So what do they mean? Well the definitions are complex, but in broad brush terms the systems, in increasing order of quality are:

**MDA** – Monochrome Graphics Adapter. Text only, no graphics, but very sharp and clear.

**CGA** – Colour Graphics Adapter. Low resolution and only four

hideous colours. Obsolete.

**EGA** – Enhanced Graphics Adapter. Much higher resolution and 16 colours to choose from. Cheap, but outdated.

**VGA** – Video Graphics Array. Higher resolution again, and 256 colours selected from a huge range. The modern standard.

**SVGA** – Super VGA. Various manufacturers produce different systems which offer higher resolution.

**XGA** – EXTended Graphics Array. IBM's new system which will undoubtedly become the new standard in time.

These systems were originally developed by IBM itself, but there is one which wasn't, Hercules. This is a black and white system which offers the same kind of resolution as VGA. It's becoming less common, but it's still the cheapest high resolution graphics system, with a monitor and card costing around £100.



be able to load these files into Quartet with the load requester.

## Constant Crashes

I have a constant problem with my 520STFM set-up, with Panasonic KXP1181 printer whilst using First Word Plus. The problem arises if I am trying to save a file with an underline character in the name ( \_ ). I need this character as I produce a lot of files which need to be numbered, and the underline creates a handy space between the filename and the version number. The program will always crash if I do this. I have to save a file and then rename it from the desktop afterwards. Have I got a faulty version of the program, it is version no. 3.10 (UK)?

**THIS IS IN FACT A BUG** in the ROMs of older STs. There should be no problem with the later versions of TOS. The easiest way to overcome this problem is to use one of the replacement file selectors available from a PD library, such as FSELECT6 or FSELECT7 or the Little Green Footballs file selector.

These programs have been written to overcome this problem. The file selector is simply placed in the AUTO folder of your boot disk and once installed all calls to the GEM file selector are redirected to the new program, without taking up too much memory. All good ST PD libraries can supply these programs, Goodman PDL are on 0782-335650.

## Secure programs

I have a small tip which some people may care to try. If you wish to disable a program so that nobody else can use your copy of



## Devpac 2 - a good read?

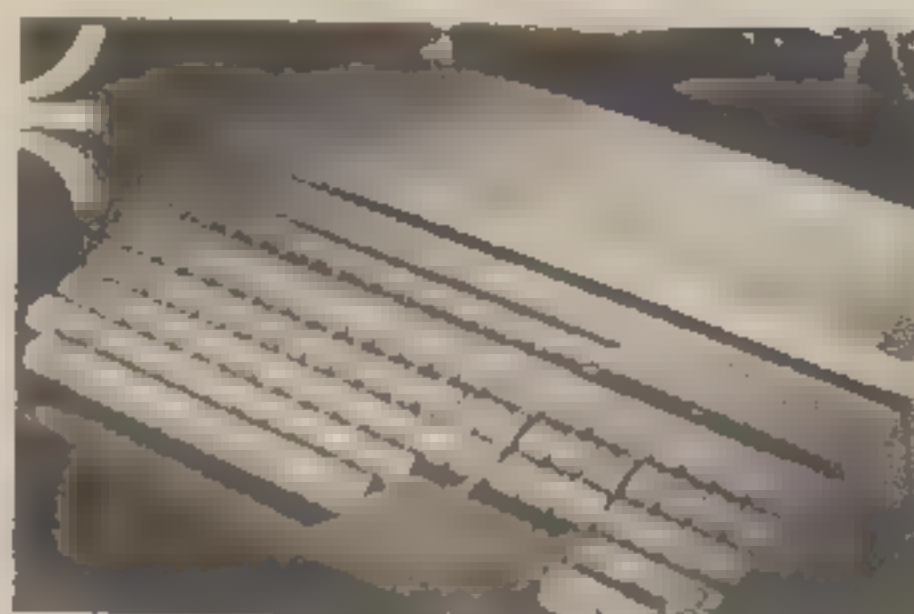
I have just bought Devpac 2 for the Atari ST and I was wondering if you could recommend a good book about the basics, that someone who has never programmed in 68000 assembly language can understand.

Could you also tell me if there is a book about sprite routines and screen manipulation in 68000 for sale anywhere?

Anthony Richardson, Cambridge

**I THINK THAT THE BEST SOLUTION** to your problem is to obtain *Introducing Atari ST Machine Code* from zzSoft. As well as providing a book, a disk is supplied containing all the examples in the book, a symbolic debugger, a .RSC editor, an assembler and linker. There are also good sections on GEM, GDOS and using 68000 from GFA Basic in over 400 pages. This is very good value for £21.

You may find it advisable to purchase a more general book on 68000 as well that is not ST specific, as you may find the descriptions of the opcodes more detailed. An excellent



•To make the most out of programming on your ST, a good read is what you need

book is *Programming the 68000* by Steve Williams, ISBN 0-89588-133-0. zzSoft can be contacted on 0422 845528.

I am not aware of any books that deal specifically with ST screen and sprite routines in 68000. However Budgie UK, the Licenseware game producers, have released a disk full of their machine code routines which include sprites, screen handling, sound, scrolling, joystick, mouse, etc.

The disk costs £3.95 and is available from The ST Club, disk no BPR.01: The Budgie UK Programmers' Library. The ST Club are at 49 Stoney Street, Nottingham, NG1 1LX. Tel 0602 410241.

it, then simply change the file extender from .PRG to something else, such as .KEY or .LOK. Then you have to edit the desktop.inf file of your boot disk so that your ST will recognise the program file as executable. Do not edit the desktop.inf file of your program disk, as this rather defeats the object of the exercise.

Always work on a **BACK UP COPY** of your boot disk, you can lose data if you are not careful!

First load the desktop.inf file into a text editor or a word processor and look for the lines as follows:

```
#F FF 00 00 00 00
#D FF 01 00 00 00
#G 03 FF 00 00 00
#F 03 04 00 00 00
#P 04 00 00 00 00
```

Now you have to add an extra line after the line ending \*.PRG as follows:

```
#G 03 FF 00 00 00
```

Ensure that you copy the line exactly except for the new file extender. Now save the edited desktop.inf file back to your boot disk, remembering to save it as an ASCII file. Now as long as you boot from the disk with the new file, you can run any program that has a .KEY file extender. The program will not run on any other ST unless it too has been booted from your boot disk.

In this way you can prevent any accidental loss of files caused by unauthorised people loading up your programs. Of course, any extender you please can be added to the file.

J Harris, Southend, Essex

they all seem to be sales outlets only. Do you know where I can get a replacement that I could install myself?

I am an electrician, so it would not be a great problem for me to install, as the connections look quite straightforward.

David Knight, Norwich.

**UNFORTUNATELY**, the ST's internal power supply is quite an expensive piece of kit, the recommended list price is one hundred pounds! As you said, it is quite simple to install the replacement as long as you know what you are doing, but are you sure that it is the power supply that is the problem? If you buy a new one and it still does not work then you are no better off than you were before.

Your best option is to contact an ST repair centre and get them to sort it out for you. Evesham Micros have a fixed repair rate of £65 for STs, as long as they have not been tampered with by unskilled amateurs. They also supply power supplies separately for £55, or for £35 on a service exchange basis. You can contact them on 0386 446441.



## Power Problems

The power supply on my 520STFM has packed up and I am desperate to get it fixed, although I am rather short of the readies at the moment. None of the computer stores where I live seem to be able to help, ■



## Logical listings?

I bought AMOS a couple of months ago, thinking that I would teach myself to program. Sadly, it's turned out to be a lot more hassle than I ever imagined. For the last week or so I've been banging my head against the proverbial brick wall, trying to get my quadratic equation program to work.

I've enclosed a listing - can you please tell me what's going wrong before I fall into despair! If I can't write this, what chance my glorious plans for writing a word processor package?

George Scott, Egremont, Cumbria

**DON'T PANIC.** There were actually only a couple of errors in your listing. All numeric variables in AMOS are integer, unless you specify them as real (ie, as being able to hold numbers with fractional parts) by appending a '#' character to their names. Omitting this means that any divisions or square roots that you do return only integer results, and are hence not entirely right.

The other problem with your listing was that you

had a plus sign where there should have been a minus. I suspect this was a typing error rather than a fundamental misunderstanding.

Your program as it stands can be quite easily modified to take into account imaginary roots (those which involve trying to find the square root of a negative number). The program below will find the roots of ANY quadratic equation:

```
Rem Quadratic equations
Rem A program to solve equations of the
form:
Rem ax^2+bx+c=0
Rem using the time-honoured formula:
Rem x=(-b-(b^2-4ac)^0.5)/2a
Input "Enter your value for a ";A#
Input "And b ";B#
Input "And c ";C#
Rem first compute bit to be square rooted
S#=(B#^2-4*A#*C#)
I=0 : Rem set to 1 if roots are imaginary
If S#<0
    I=1
    S#=-S#
End If
S#=Sqr(S#)
```

```
Print "Roots are x = ";
If I=0
    Print (-B#+S#)/(2*A#)
    Print "or x = ";
    Print (-B#-S#)/(2*A#)
Else
    Print -B#/(2*A#);" + ";S#/(2*A#);" i"
    Print "or x = ";
    Print -B#/(2*A#);" - ";S#/(2*A#);" i"
End If
```

As you probably know, trying to find the square root of a negative number results in an error. Yet certain quadratic equations require just that. The way around this is to make use of imaginary numbers, the most basic of which is known as 'i' and is defined as the square root of -1 (minus one). So i^2=-1.

To find the square root of a negative number, simply find the square root of the equivalent positive number and multiply it by i. (Bear in mind that i has no REAL value - that's why it's called 'imaginary'.) In this way, the roots to any quadratic can be calculated. Notice the nested 'IF' statement that has to be used to take account of this, and the variable 'I' which is used to remember whether or not the results are imaginary.



## COMPUTER JOBS

### PROGRAMMERS

We are looking for PC and Amiga programmers to work on a number of projects, including games and educational software. We are particularly interested in hearing from programmers with experience in 'C' as well as in 68000/8X86.

Freelance contracts are available for immediate start, or at a later date.

Please write to:

**CREATIVE MATERIALS LIMITED**  
Attn: Maria Taylor  
28 Church Lane  
Prestwich  
Manchester M25 5AJ

PLEASE NOTE: We cannot deal with telephone enquiries relating to this advert.

### GAMES DESIGNER HARDWARE AND SOFTWARE

NORTH-EAST

CIRCA £20,000 + CAR

The Noble Organisation Limited have created the position of Development Engineer and are now inviting applications from suitably qualified people ideally with a Leisure Industry background.

Applicants should be fluent on the Z80 and/or 68000 systems development and possess sufficient hardware knowledge and experience to become the "All in One" development team. The position will require involvement on site as well as within a workshop environment, as fine tuning of the product is paramount. Relocation expenses will be available for the successful applicant.

Please write in the first instance, with full C.V., an indication of current salary package and a recent passport style photograph to: Mr Peter Drury, Divisional Controller.



**THE NOBLE  
ORGANISATION  
LIMITED**

17B Saltmeadows Road, Gateshead, Tyne & Wear, NE8 3AH.



### Production editor

Salary according to experience

- Founded in 1985
- Now over 220 staff
- Market leader in computer titles
- Exciting launch plans
- Britain's fastest-growing publisher
- 17 national magazines including Amiga Shopper, Amiga Format, Amiga Power, New Computer Express, PC Plus, Classic CD, Mountain Biking UK, Needlecraft

Amiga Shopper is the leading magazine for serious users of the Amiga computer; no games here! We intend to lift the production standards of the magazine above the other run-of-the-mill computer titles, so we need a production editor who gets things done.

Superb subbing skills are essential; much of the work involves turning contributors' offerings into cogent English. Extracting copy from recalcitrant authors requires a strong personality. The ability to find a way out of an impossible situation would be useful, as would an eye for a striking headline.

We work entirely on Macs: DTP experience is essential. No prior knowledge of Amigas is required, so Amiga tech-heads with no publishing experience need not apply.

Please write with CV and details of current salary to the editor, Stuart Anderton.

### DO YOU WANT TO BECOME A PROGRAMMER?



Established 1968

**Move across to the rewarding  
world of IT**

We have a series of short and long term training programmers in Computing and Information Processing.

- \* C & G 424/425 Certificate in applications programming.
- \* C & G 418 Computer Programming & Information Processing.
- \* Evening courses in DBASE, WP, Spreadsheet Analysis.
- \* Evening courses in Pascal, BASIC & COBOL.

Contact Central London College on  
071-580 4596.

**TRAINING FOR YOUR FUTURE**



# EXPRESS ON-LINE

This week Express On-Line presents you with the latest guide to Bulletin Boards open to you across the kingdom.

## EXPRESS IS NOW ON-LINE!

Join the Express conferences on ASPECT (061-792 0260) and CIX (081-399 5252).

## NEW ARRIVALS

### BBSs

● **Amiga BBS** - On-line 10pm-8am, 52Mb of support for Amiga and others. Now running 4D V1.63 with on-line games. Call: 0742 671655

● **CIRCE'S CORNUCOPIA** - Scottish Amiga BBS. Adventure solutions our speciality. Sysop Anne Roy. Speeds 1200/2400, 8pm-2am. Call: 0563 39699

● **INFOSOFT** - Cleveland catering for Atari, Amiga, CP/M, IBM machines, files Echomania/Netmail areas available.

9pm-8am. Call: 0642 764245 up to 2400 baud. All welcome.

● **ORION BBS** - Amiga users only, speeds up to 2400. Call 051 6912430 from 9pm until 7am

● **THE SMOKE BBS** - 071 737 2457, 9pm-6am, V21/V22 bis

● **01 FOR AMIGA** - Call 071 377 1358. v21/22/22b/23

## Bulletin Boards

### A

Aardvark	0284 767118	2400/8N1
A-Board	0375 23201	2400. 8/N/1
Above Board	0254 682862	HST
Absolute Zero Q	081-741 7233	V21/22/22b/23
Advance (Opus) Hull	0482 586285	Up to 2400
Agnus	061-976 1559	V21/V22/V22bis
Alchemist	0666 504597	
Alternate Reality	0352 856626	V21/22/22b/23
Alternative Viewdata	081-761 8220	V21/23/23v
Altmac PC Board	0324 665371	300-2400MNP5
	0324 665460	HST
	0324 665449	Hayes V 9600
Amiga II	0619 626377	
Amiga Board	0268 510495	V22/22b/23
Amiga Connection	081-981 9289	V21/23
Amiga Shack	0737 361178	V21/22/22b/23
Amiga South East	0293 28464	V21/22/22b/23
Amitech Support	0202 294716	V21/22/22b
Andrew's BBS	0384 296964	V21/V22/V22bis
Andromeda Galaxy	0243 379430	V21/22/22b/23
Angus	061 976 1559	V21/V22/V22bis
Apparition	0268 289105	
Apricot Tech Sup	021-456 2402	V21/22/22b/23
	021-456 2401	V21/22/22b
Arcade Fantasy	0533 376056	300-2400
Arena	0625 539063	V21/22/22b/23
Aspects	061-792 0260	V21/22/22b/23
ASTon-line	081-847 5389	
Attic	081-308 0466	V22/22b

### B

Babbs Tower	0394 276306	V21/22/22b/23
Barney's Rubble	021-441 1801	V21/22/22b/23
Bart Simpson BBS	0241 89261	up to 1200
Bay	0843 225689	V22 Bis/MNP5
Beyond Belief	0642 787898	V21/23
Blitter BBS	0292 671638	300-2400
Body Matters	071-603 7581	V21/22/22b/23
Bona Board	081 675 7549	2400
Brunel BBS	0272 584352	V21/22/23
Budget	021 311 1068	Up to V22bis
Buz Board	081-202 9175	V21/22/22b

### C

Cargo BBS	0420 475462	V21/22/22bis
-----------	-------------	--------------

Campus Res	0223 357445	V21/22/22b/23
Canonbury	071-704 2535	V22/V22bis
Castle BBS	0276 691872	V21/22/22b/23
Cats Board	0628 824852	HST
Central BBS	021-711 1451	V21/22/22b/23
Chipboard	0532 320225	V21/23/23v
Chichester	021-770 6937	Up to 2400bps
Chronos Lair	021-744 5561	V21/22/22b/23
The City BBS	021 352 1237	300-2400
CIX	081-399 5252	V21/22/22b/23
Clapham Junction	0234 64261	V21/22/22b/23
Cliff's Corner	0502 518274	V21/22/22b/23
Connections	081-903 1309	V21/V23/V22/V22bis
Compassil	0942 896661	
Computers 4 Christ	0926 428294	V21/22/22b/23
Connections	081-903 1309	V21/23/23v
Connex	071-431 3922	HST
CP/M User Group	0753 868196	V21/22/22b/23
Crown Green	071-245 1512	V21/22/22b/23
Crystal Junction	0384 441929	V21/V22/V22bis/HST
Crystal Tower	081-886 2813	V21/22/22b/23
Cura	0604 27885	HST
Cv Database Bb	0427 810211	V22/22b

Cybernet	071-978 8595	up to 2400 + Mn8
Cyberspace Amiga	0295 275045	V21/V22/V22bis
Cynotel	081-346 2816	V23v

### D

DIE	061-434 9907	V21/22/22b/23
Dabblers' Lair	0270 624248	
Dambusters	0203 333195	V21
Dark Crystal	081-207 2989	HST
Dark Halo	0392 434477	HST
Dark Side	0446 33729	V21
Darkhaven	0604 413716	V21/22/22b/23
Data Network	081-478 5464	V21/22/22b/23
Datanet	0245 323693	Up to 14.4kbps
Datase/wonderland	081-680 5330	V23
Dataseft Opus BBS	0460 54615	V21/22/22b/23
Datatrade III	0536 725180	HST
Dbase User Group	0532 842213	V21/22/22b
Delta	0252545269	
The Demo Factory	0892 516304	300-14.4K/HST/V32
Diamond Opus	0791 86504	HST/V32
Digital Matrix	021-705 5187	V21/22/22b/23
Direct Access	0935 79760	up to 2400
Direct-line 1	081-841 1847	V21/22/22b/23
Direct-line 2	081-842 2030	V21/22/22b
The Dock	091 454 6978	300 to 2400
Domain BBS	081-773 2422	V22/22b
Dragon's Tower	081-202 0709	V21/22/22b
D-TEL Viewdata	0325 332117	V23
Dunedin Blackhole	031-669 2974	
Dwarfen Realm	0376 501036	V23v

### E

Edinburgh Castle	031 334 7043	HST
Empire BBS	0473 683215	V21/V22/V22bis
Empirical Research	0543675158	V21/22/22b/23
Empyrron	0792 580781	V21/22/22b/23
Engineers Workbench	051-327 7036	V21/22/22b
Equaliser	0232 454097	V21/V22b/V23
Eureka II	081-683 0629	V21/22/22b/23
Exchange S/w	0767 5051	V21/22/22b/23
Eye-2	0525 715789	V21/22/22b/23

### F

Fal Opus	0736 794827	V21/23
Falcon BBS	081-527 4165	V21/22/22b/23
Family Skeletons	0480 812097	V22b
Fatter Angus	0703 420118	V21/V22/V22bis

Fido UK1	0734 713909	V22/22b
Flight Path	081-759 1957	V22/22b
Focus International	0905 795002	
Focus Tbbbs	0303 42690	HST
Focus UK	0905 774477	V21/22/22b/23
Folkestone BBS	0303 45203	V21/V23/V22/bis
Forth View	031 680 8680	V21/22/22b/23
Fourth Dimension	0202 600305	V21/V22/V22bis/V23

Foundation	0473 688183	12/2400
Free For All	0783 261624	V21/22/bis/23

### G

Gallery QBBS	081-847 2795	V21/22/22b
Game Over	0752 848070	V21/22/22b/23
Games Online	0273 898200	
Ger's Lair	071 436 5749	300-2400
Gnome At Home	081-888 8894	V23v
Gods	081-994 9119	V21/23
Golly!	0734 320812	V21/22/22b/23
Good Life	081-541 0187	HST
Gosh BBS	0257 287186	V21/V22/V23
Gourmet	0474 536654	V21/22/22b
Grainstore	0905 770198	V21/22/22b
Grenadier	0825 762803	V21/22/22b
Guernsey Island	0481 48393	300/1200/2400

### H

Harlequin	061-945 3612	V21/22/22b/23
Hastings BBS	0424 717919	V21/22/22b/23
Hawk's Castle	0344 411621	HST
Hawk's Realm	081-863 8751	300-2400
Hazzard	071-737 0505	V21/22/22b/23
Hilary's Board	0277 233468	V21/23
Humbly Grove East Coast Systems	0964 614524	300, 1200, 2400

### I

Ichthus (trinity)	0734 461466	V21/22/22b/23
	0903 700771	V21/22/22b/23
Industrial Archaeologists Diggings BBS	0517 331135	300 ■ 2400

### J

Jersey BBS	0534 37779	V21/22/22b/23
Jersey Opus	0534 39389	V21/22/22b/23
Jocks Away!	031-225 5368	V21/22/22b/23
Jolly Fisherman	0754 67796	V21/22/22b/23
Jolly Roger	081-742 1640	V21/22/22b/23

## Let all the world know

Do you run a user group or bulletin board? Do you publish a fanzine? Let the world know about it through *Shopping Express*. Fill in this form and send it to us at: Express On-line, 30 Monmouth Street, Bath BA1 2BW.

(Tick as applicable) Group BBS Fanzine

Your name .....

Address: .....

● Write your ad in block capitals on the grid below using one word per box.




# BBS LISTING

**K**  
 Kirkdees Opus 0484 665415 V21/22/22b/23  
 King The Castle 0233 620228 V21/22/23  
 Komputer Knidge 0844 274066 V21/22/22b/23

**L**  
 Labyrinth 051-724 4458 V21/23  
 Lamplight Qbbs 0705 811531 V21/22/22b/23  
 Laser Tobs 0532 438430 V21/22/22b  
 Lau's Bb 081-751 6096 V23v  
 Level 9 0926 689208 300-2400  
 Lightfinger's Place 0202 485723 V21/22/22b/23  
 Linelight 0580 212043 V23v  
 Linx BBS 0522 511277 V21/22/22b/23  
 Nova-net 0274 370760 V22  
 Liverpool Mailbox 051-428 8924 V21/22/22b/23  
 Liverpool Ros 051-931 4271 V21/22/23  
 Loch lomond 0389 55762 V22/V22bis  
 Loft 0442 230461 V21/22/22b/23  
 Logical BBS 0772 623167 300-2400  
 London City Mag 081-468 7648 V21/23/23v  
 London Connexion 081-667 1313 V21/22/22b/23  
 London Embassy 081-366 1778 Hst  
 London Mail Centre 081-534 1200 V21/22/22b/23  
 London Metropolis 081-519 1055 V21/22/22b/23  
 Loony Bin 0703 787489 V21/23

**M**  
 Mach II BBS 0242 260 685 V21/22/22bis  
 Mactel Metro 081-543 8017 V21/22/22b/23  
 Mactel Phoenix 0473 610139 V21/22/22b/23  
 Madness BBS 0603 300947 V21/22/22b/23  
 Magic Castle BBS 021-430 3761 V21/22/22b/23  
 Magic Mushroom 0381 83641 V21/22/22b  
 Magnum 0274 547006 V21/22/22b/23  
 Magrathea 0376 24402 V23v  
 Malvern BBS 0684 892904 up to 2400  
 Manor 0980 863031 V21/22/22b/23  
 Marctel 081-346 7150 V21/23/23v  
 Matrix 051-255 0225 V21/22/22b/23  
 Max BBS V21/V22/V22bis/V24/V32/V42/V42bis  
 9800/14K4/MNP and LAPM. Numbers as follow  
 0905 52536 Allen Node

0905 57822 We've Got A Hot One Here  
 0905 58030 Throbneth Node  
 0905 56610 So You Like Spam Node  
 0905 57112 Dirty Lines Node  
 0905 56335 Amiga Node  
 0905 58042 Troffers Node  
 0905 754151 For All Software Troffers  
 0905 754127 Live and Kicking Dawn Raid  
 Maximum 0905 429595  
 Mobs Mitcham Ilc 081-648 0018 V21/23  
 Medway 0634 280031 V21/22/22b  
 Merlin 0443 834179 V21/22/22b/23  
 MetNet Train System 0482 473871/442251/449028  
 V22bis/V23 and faster  
 Micro Live 081-567 6500 V21  
 Micro Update 081-877 1529 V21/22/22b/23  
 Microdeal 0726 65422 V21/22/22b/23  
 Microlog 0422 71921 V21/22/22b/23  
 Midget Gem 0748 834836 V21/23  
 Mind Boggles 0362 762868 V21/22/22b/23  
 Mindian 0273 588924 up to 2400  
 Minnet 3 0642 672813 V21/22/22b/23  
 Miracom Support 0473 232540 Hst  
 Mirage 061-652 1242 V21/22/22b/23  
 Mirror II 0628 810889 V21/22/22b/23  
 Mirrorworldquest 1 0883 844044 V23  
 Mission Impossible 0602 654329 Hst  
 Mk Board 0908 671289 V21/22/22b/23  
 Movie BBS 0703 650037 V21/V22/V22bis  
 Multi BBS 041-649 9043 V21/22/22b/23  
 My Little Phoney 0793 849044 V21/V22/V22bis/V32/HST

**N**  
 Network 0274 482021 V23v  
 New Wave 061-839 5381 V21/V23/V32/HST  
 Night Hawk 0329 45384 300/1200/2400  
 Nile Life 071-976 6807 V21/22/22b  
 No.1 BBS 081-958 1689 V21/22/22b  
 Noah BBS 0272 572322 300-2400  
 North Wales BBS 0978 88372 V21/22/22b  
 Northern Lights 0768 773885 V22/22b  
 Norwich Onion BBS 0603 423305 V21/22/22b/23  
 Nova 0455 553371 V21/22/22b

**O**  
 Odd-ball 081-679 2583 V21/22/22b/23  
 Odyssey 0482 870919  
 On The Beach 0273 600996 V21/V22/V22bis/HST  
 On-Line Entertainment 081-539 67638-N-1/V22/V22bis/V23  
 Open Access 081-427 3974  
 Optix 0482 872294 V21/22/22b/23

**P**  
 Palm Beach 0303 265979 V21/22/22b/23  
 The Paradise Club V21/V22/V22bis/V23 081-871 4300  
 Pazaz Viewdata 0383 620259 V23v  
 PC Access 071-608 0081 V21/22/22b/23  
 PC-Amiga Link 04023 84914 up to 2400  
 PC Forum 0322 335348 V21/22/22b/23  
 PC Link 0375 674046 V21/V22/V22bis/V32  
 PC Serve Shop 081-864 2633 V21/22/22b/23  
 PC Serve Softnet 0895 420164 V21/22/22b/23  
 Serve Storehouse 0494 728094 V21/22/22b/23  
 PC-VAX Opus 081-800-3549 V21/22/22b/23  
 PC/Amiga BBS 0602 735119 V22/22b  
 Peacenet West 0895 448998 V23v  
 Pegasus 0905 755085 V21/V22/V22bis/HST 14.4/V42/  
 V42bis  
 Phacs SW UK 0752 361291 V21/V22/V23/V22bis  
 Phantom 0226 340425 V21v/V2v/23  
 Phoenix 0249 817704 Hst  
 Pleasure Island 0628 472996 2400 to 14,400bps

Project BBS 0384 401770 V21/22/22b/23  
 Prometheus 081-300 7177 V23v  
 Proximity 0793 480028 V21/22/22b/23  
 Publishing Shop 091-261 5228 V21/22/22b/23  
 Public House 022-665 907 V21/22/22  
 Purely PC 0232 645942 V21/22/22b  
 Pyroto Mountain 0895 59071 V21/22/22b

**Q**  
 Quantum 021 707 0681 V21/V22/V22bis  
 Quasar 0646 693067 V21/22/22b

**R**  
 Random Access 0282 817379 V21/V22/V22bis/9600/HST/V32  
 Really Interesting 0582 414991  
 Reflex BBS 0703 685527 V21/22/22b/23  
 Regency BBS 0542 33050 V21/22/23  
 Road Runner 061-483 4105 V21/22/22b/23  
 Royalink UK 0562 66807 V21/22/22b

**S**  
 SAC BBS 0242 260685 V21/22/23/22b  
 Sanctuary 0329 236612 V21/V22/V22bis/HST  
 Scabbs 0909 479080 up to 2400  
 Scary Monster 0734 320297 Hst  
 The Schizophrenic Wolf 0772 456526 V21/V22/V22bis  
 Scottish Opus 041-880 7863 V21/22/22b/23  
 Scottish Wildcat 0674 671141 V21/22/22b/23  
 Sentinel Bb 0629 781429 V21/22/22b/23  
 SES Databoard 0622 630240 V21/V22/V22bis  
 Sherwood Forest 0602 397113 V21/22/22b/23  
 Short Circuit 0273 462967 Hst  
 Sigma IV 081 330 7738  
 Sirius 081-542 3772 V21/22/22b/23  
 Sirius II 0494 778425 V21/22/22b  
 Six And Five Eights 0273 688888 V22/V22bis  
 Skull 0379 740972 V22/V22bis  
 Skull's Tower 081-943 1194 V21/22/22b/23  
 Sleepy Town 0234 267231 V21/V22/V22bis  
 Sphere BBS 0294 221350 V21/22/23/22b  
 Spud's Xanadu 0203 686819 V21/V22, V23, V23b

Sputnik Spitfire 0501 31754 V21/22/22b  
 St London BBS 081-443 2432 V21/23  
 Stabb 0793 855176 V21/22/23/22b  
 Steve and Jackie 0703 650037 V21/V22/V22b/V23  
 Strange Brew! 081-665 5038 V22/22b  
 Style QBBS 0442 381164 300-14.4K (HST)  
 Superbase BBS 081 339 0096 300-14.4K/HST/V32  
 System X 0904 612934 2400

## AMIGA, ATARI & PC SOFTWARE

### The Tipster

TIPSTER IS THE NO. 1 SELLING HORSE RACING PROGRAM AND CONTINUES TO OUT-PERFORM NOT ONLY ALL OTHER PROGRAMS BUT ALSO THE BOOKIES. USING DATA FROM THE RACING POST OR ANY NEWSPAPER, THIS PROGRAM WILL SELECT THE BEST HORSES AND OFFER BETTING ADVICE.

### The Punter

LET YOUR COMPUTER TRY TO MAKE SENSE OF THE BRITISH POOLS. THIS SOFTWARE CAN BE USED FOR ANY POOLS COUPON. THE AUSTRALIAN LEAGUES ARE INCLUDED FOR NEXT SEASON.

### The Dogs

THE DOGS USES DATA FROM THE RACING POST AND MOST NEWSPAPERS TO RATE GREYHOUND RACES OVER FLAT AND HURDLES. THIS PROGRAM IS VERY EASY TO USE. AN IDEAL GIFT FOR THE MAN WHO HAS EVERYTHING.

### League Manager

THIS PROGRAM ENABLES YOU TO MANAGE UP TO 14 TEAMS IN 5 LEAGUES ON ONE DISK. IDEAL FOR SCHOOLS AND ANY SPORT INCLUDING: FOOTBALL, GOLF, SNOOKER, DARTS, BILLIARDS, POOL, SQUASH etc.

### The Bookie

THIS NEW RELEASE CALCULATES THE RETURN FROM MULTIPLE BETS, YANKEE, PATENTS etc. A GRAPH DISPLAYS YOUR DAILY BETTING PATTERN. THIS CAN BE USED TO INCREASE YOUR CHANCES OF WINNING.

VISA

£24.95 each

SIDMOUTH SOFTWARE

PO BOX 7

SIDMOUTH

DEVON, EX10 0

TEL: 0395 67073

£19.95  
for a DEMO  
DISK

## SELF ADHESIVE COMPUTER DISK LABELS

**DISK LABELS - 3" & 3 1/2" Disk, 70 x 70mm on tractor feed backing for computer overprinting.**  
 White: 500 - £18.88, 1000 - £26.19, 2000 - £31.30.  
 Tinted labels in - Blue, Pink, Grey, Cream, Yellow, Orange, Green: 500 - £25.53, 1000 - £36.43, 2000 - £50.95.

**5 1/4" Disk, 95 x 36mm, White: 500 - £15.74, 1000 - £21.36, 2000 - £25.27. Tints as above: 500 - £20.87, 1000 - £29.25, 2000 - £40.40**

**DATA LABELS** - printed with horizontal ruled lines for data disk labelling of both 5 1/4", 3" and 3 1/2", these labels are coloured red, green, blue or old gold, and can be supplied in single colour or four colours along the roll, perforated between labels.  
 5 1/4" 1000 - £25.35, 2000 - £32.81, 5000 - £57.34  
 3 1/2" 1000 - £31.30, 2000 - £41.48, 5000 - £62.22

All prices are inclusive of VAT & carriage

We are specialist computer label makers and can provide printed labels in 24/48 hrs. For price list and sample brochure of our full range of self adhesive micro computer labels plus details of excellent quantity discounts

Sittingbourne (0795) 428425 (24 hrs)  
 Fax: (0795) 422365

Industrial  
Process

SELF ADHESIVE  
LABELS  
SUPERFAST

Unit 15  
 Church Road  
 Business Centre  
 Sittingbourne  
 Kent ME10 3RS  
 England



## THE PLACES TO BE ...

<b>T</b>		
TABBS	0533 517615	V21/22/23
Tabbs	0225 743797	V21/22/22b/23
Taecom	0994 6709	V21/23
Taf's Retreat	0834 4562	V21/22/22b/23
Tardis	0772 27236	V21
Trinity I	0392 410210	V21/22/22b/23
Trinity II	0367 22764	V21/22/22b/23
Tug II	0905 775191	V21/22/22b/23
Twilight Zone	081-788 0884	V21/22/22b/23
Twilight Zone II	071-608 1485	Hst

<b>U</b>		
Unauthorised Access UK	0636 708063	1200/2400

<b>V</b>		
Valente'S BBS	071-978 2078	Hst
Vector System	0329 45824	Hst
Viking East Anglia	0255 503048	V23v
Village	081-464 2516	V21/22/22b/23
Village Fayre	081-841 5971	V23
Voyager BBS	081-725 9580	V21/22/22b/23

<b>W</b>		
Wally's Board	0506 440582	V21/V22/V22bis/V23
West Norfolk	0553 761290	1200/2400
White Lightning	0635 37259	V22/22b
Wizard	0703 702427	up to 2400/MNP
Wolverhampton ROS	0902 745337	V21/22/22b/23
Womble Base	081-979 9806	V23
Woodgreen BBS	081-889 5624	V21/23

<b>Y</b>		
Yugo BBS	0734 753648	V21/22/22b/23

<b>Z</b>		
Zeus BBS	0487 710487	V21/22

**Making the Difference**  
Now - Tue 31 Dec  
Science Museum, Kensington, London.  
Info: 071-938 8080

**All Formats Computer Fair**  
Sun 6 Oct  
The Brunel Centre, Bristol.  
Info: 0225 868100.

**Effective Management of Information Technology Security Conference**  
Mon 7 - Tue 8 Oct  
Forte Crest Regents Park Hotel, London.  
Info: 071-587 1117.

**Design Engineering Show 1991**  
Mon 7 - Thurs 10 Oct  
Hall 5, NEC Birmingham For info 091 416 4570

**Computers Count**  
Tue 8 - Thu 10 Oct  
Totnes Civic Hall. Info: 0803 863821.

**Business Communications Awards**  
Thu 10 Oct  
Savoy Hotel. Info: 0800 800 847.

**Charles Babbage's Impact on Modern Computing**  
Wed 8 Oct  
The Science Museum, London at 17.30.  
Info: 071-938 8196.

**Image Processing '91**  
Tue 29 - Thu 1 Oct  
Birmingham NEC. Info: 081-868 4466.

**System Builder**  
Wed 30 - Thu 1 Oct  
Sandown Exhibition Centre, Esher, Surrey. Info: 0822 614671.

**Computer Animation Festival**  
Thu 31 October - Fri 1 Nov  
To accompany the Computer Graphics '91 Conference, this festival acknowledges work of outstanding creative and technical excellence in visualisation, research and development; features and shorts, best title; best on-screen presentation; idents and stings, programme and content and student. Marble Arch Odeon (rescheduled from 5 November owing to a screening of the epic film *Spartacus*). Info: 081-868 4466.

**Computer Graphics '91**  
Tue 5 - Thu 7 Nov  
The Alexandra Palace, London. Developments in technology, software and applications. Topics include graphics: a world perspective; design; modelling natural phenomena; computer animation; Virtual Reality and visualisation. Info: 081-868 4466.

**Desktop Cad '91**  
Tue 5 - Thu 7 Nov  
As above.

**Open Systems '91**  
Wed 6 - Fri 8 Nov  
Olympia, London. Info: 0784 472200.

**All Micro Show and Radio Rally**  
Sat 9 Nov  
Bingley Hall, Stafford. Info: 0473 272002.

**Computers in the City**  
Tue 13 - Thu 15 Nov  
The Barbican Centre, London.  
Info: 081 868 4466.

**World of Commodore Show**  
Fri 15 - Sun 17 Nov  
A show for all things Commodore, presented by the Amiga Format team. At Earls Court, London.  
Info: 0462 420785.

**The Next Generation: Computing with Light**  
Thu 21 Nov  
Lecture at King Edward VI College, Totnes. Info 0803 863821.

**Vision and Reality**  
Thu 28 - Fri 29 Nov  
A conference on multimedia at Jaarbeurs, Utrecht, The Netherlands. For more info: +31 (0)70 3560666.

**South Wales Computer Fair**  
Sun 10 Dec  
The Afan Lido, Port Talbot. For info call: 0792 310865.

## COMPUTER TECHNOLOGY FAIRS

### THOUSANDS OF BARGAINS FOR ALL

**For 8, 16 & 32 Bit Computers  
+ Games Consoles.**

### SHOW DATES

**Brighton 20th October**  
Corn Exchange, Church Street

**Southampton 3rd November**  
Guildhall, Civic Centre

**Manchester 1st December**  
Whitworth Hall,  
Manchester University

**Birmingham 12th January 1992**  
Solihull Conference Centre

**THE UK'S TOP DISCOUNT DEALERS WILL BE  
PRESENT, SELLING SUCH GOODS AS:**

- New and used systems • Spare Parts • D.I.Y. Parts • Memory Upgrade • Simms • Sipps • D-Rams • Boards • Disk Drives • Hard Drives • Mice • Books • Blank Disks • Joysticks • Printers • Faxes • Keyboards • Monitors • Public Domain/Shareware • Disk Boxes • Disk Labels • VGA Cards • Cables • PC Motherboards • 286/386SX • 386DX • 486 • Controller Cards • Mouse Mats •

**JUST SOME OF THE MACHINES & SOFTWARE CATERED FOR:**

- IBM • Compaq • PCs in general • Amiga • Atari • Amstrad • Spectrum • C64 • Sega Megadrive & Master System • Nintendo • Plus many others.

**Show Time from 10am to 4.00pm.**

**Admission adults £2.50, children/OAP £1**

**STALLS  
AT ALL  
SHOWS**

**£45 - FOR 1  
£85 - FOR 2  
£120 - FOR 3**

**STALL HOLDERS TEL/FAX**

**JENNY ON**

**0273 607633**

**OR WRITE TO:**

**CITE 16-MANOR ROAD,  
BRIGHTON, SUSSEX  
BN2-5EE**



# Sudbury Electronics

771, Harrow Road, Sudbury, Wembley, Middx.

**Telephone: 081 908 1888**

**Fax: 081 904 8002**

## 286/12MHz System

40 M/Byte 28 M/S Hard Drive  
1.1MB Ram 1.2 and 1.44 Floppy  
Drives. 2 serial and 1 Parallel Ports.

V.G.A. Colour Monitor  
and 24 Pin L.Q.

**PRINTER - ONLY £825.00**

**WITHOUT PRINTER - £699**

## 386/25 MHz System

40 M/Byte Hard Drive 2 MB Ram

1.2 and 1.44 Floppy Drives

2 Serial and 1 Parallel Ports

0.28 D.P.T. VGA Multisync Colour  
Monitor (Mitsubishi) **£975**

## 386/33 MHz 64K Cache

110 M/Byte Hard Drive

4 Meg Ram S.V.G.A. Colour Monitor

102 Key Board 1.44 and

1.2 M.B. Floppy Drives

2 Serial and 1 Parallel Ports **£1250**

## PRINTERS

Oki 390 with sheet feeder **£199**

Oki 393 with sheet feeder **£275**

Oki 393 Colour with sheet feeder **£350**

(Please note all above

printers Badged Siemens)

Siemens 3100 24 Pin Printer **£160**

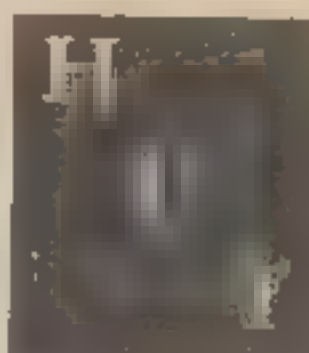
High quality 102 Keyboards made by  
Bull with P.S.2 Adaptor **£27.50**

A.S.T. 286 system with EGA Colour  
Monitor and 70 M/Byte Harddisk **£650**

As above but with 40 M/Byte  
Harddisk **£600**

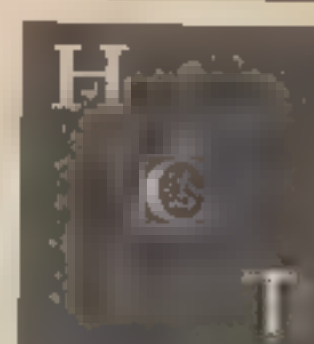
Lots of other bargains for the P.C.  
Builder and Electronics Enthusiast.

Add 17.5% VAT to all prices



## HERON COMPUTER TECHNOLOGY

15 WISP GREEN, EDINBURGH, EH15 3QX  
Tel/Fax: 031 669 7100 Mobile: 0831 401065



### AMIGA 500

**CARTOON CLASSICS PACK**  
Amiga 500, 512k Expansion, TV  
Modulator, 3 games:- Lemmings,  
Bart Simpson and Captain Planet  
Also Deluxe Paint III  
Animation Software  
**ONLY £374.00**

### AMIGA C.D.T.V.

**CBM's NEW CD ROM AMIGA**  
The new C.D.T.V system can play any  
standard Audio CD as well as Amiga CDs  
C.D.T.V, Remote Control, Welcome Disc,  
Users Manual, Hutchisons Encyclopedia,  
Lemmings and all relevant cables.  
**ONLY £579.00**

### AMIGA 1500 PACK

Amiga 1500 (1Mb), Mouse, The  
Works Platinum, Deluxe Paint III,  
Battle Chess, Their Finest Hour,  
Sim City + Terrain Editor,  
Populus + Promised Lands and  
Get The Most Out Of Your  
Amiga (book).  
**ONLY £679.00**

AMIGA A590 20Mb HARD DRIVE £285.00  
256 x 4 DRAM FOR ABOVE (16=2Mb) £6.00  
1084 COLOUR STEREO MONITOR £260.00  
3.5" AMIGA DISK DRIVE £65.00  
3.5" CUMANA DISK DRIVE £69.00  
3.5" CUMANA AMIGA DRIVE,  
PREDATOR 2, HARI DRIVIN AND  
LICENCE TO KILL £79.00  
0.5Mb EXPANSION £30.00  
0.5Mb EXPANSION WITH CLOCK £39.00

### ATARI 520ST-E DISCOVERY XTRA PACK

Atari 520ST-E Mouse, Anarchy,  
Dragons Breath, Indiana Jones -  
Last Crusade, Super Cycle,  
Neochrome, ST Tour, First Basic  
and Atari Joystick  
**ONLY £309.00**

ATARI 520 ST DISCOVERY PACK £259.00  
ATARI 1040 ST-F FAMILY  
CURRICULUM PACK £369.00  
ATARI SC1224 COL MONITOR £280.00  
ATARI SM124 MONO MONITOR £145.00  
ATARI LYNX £75.00  
SEGA MASTER SYSTEM £50.00  
SEGA MASTER SYSTEM PLUS £79.00  
SEGA MEGA DRIVE £140.00  
SEGA GAME GEAR £95.00

ALL PRICES INCLUDE V.A.T. BUT EXCLUDE DELIVERY.  
WE ACCEPT ACCESS, VISA AND CHEQUE.  
PLEASE ALLOW 5 WORKING DAYS FOR CHEQUE TO CLEAR.  
PLEASE MAKE ALL CHEQUES PAYABLE TO **HERON COMPUTER TECHNOLOGY**  
TEL/FAX 031 669 7100 MOBILE 0831 401065

## Complete Systems Auctions

## Next Auctions

**28th Sept....Warwick Racecourse**

**19th Oct....Haydock Racecourse**

**2nd Nov....Cheltenham Racecourse**

## Catalogues - £1.00

For further information or details of  
private treaty deals please call our  
Auction Hotline on

**(0384) 67885**



# AMIGA

- Is an Amiga portable on the way?
- More delays as Commodore puts back the release of its A690 CDROM drive
- Commodore CDTV still keyboardless, but LightWave comes up with the answer
- PC software on your Amiga for the price of a disk!

## AMIGA MOVES ON

The gossip channels are alight with talk of an Amiga portable from Commodore.

Although the company itself still insists that an Amiga portable is not planned for the foreseeable future, several sources in both Europe and the States are claiming otherwise.

For starters, recently published style guides for programmers advise developers that programs should look good and be useable on a mono screen. Such a request may seem strange when you consider that very few users would even contemplate using a mono screen on their colourful Amiga, but it seems that Commodore may well be covering itself for future developments.

No one can say for sure whether this is true, due mainly to the fact that the company has been promising Amiga users a high resolution mono monitor for DTP work for a couple of years now, in the shape of the A2098 (which is basically a rebadged Viking monitor).

However, several respected developers think that this is not the only reason. If Commodore were to produce a portable Amiga, it would almost certainly have to plump for a mono LCD display in preference to the newer colour displays that portables now offer.

Such a move would ensure that the price of the new portable is kept to a minimum, allowing the kind of people that really want to own it to buy the thing.

Don't expect it to be cheap though – even the ST portable costs almost

£2000, so an Amiga portable will probably be more expensive than this.

Another piece of evidence which points to Commodore is the news that German developer GigaTron had ceased development of its own portable Amiga.

Although the system had been in development for several years, the project mysteriously stopped. GigaTron blamed it on financial considerations, but could the truth be somewhat different?

Did Commodore put in its corporate boot? Only GigaTron can really confirm this and it's keeping uncharacteristically tight-lipped.

If a portable Amiga was to appear, I'm not entirely sure whether it would be a success. Many of us would love to own one, but unless Commodore could knock the thing out for no more than £800, I can hardly see it selling. Well, rich poseur Amigans would no doubt rush out and buy one, but who else? Commodore will no doubt push it as a portable video

## CDTV KEYBOARD LAUNCH



• Commodore - pipped at the post

Whilst everyone else is still waiting for Commodore to launch its official CDTV Keyboard, LightWave has launched an adaptor that will bridge the gap. The device, which plugs into the keyboard connector of the CDTV, will allow users to directly connect a B2000 keyboard.

No price has yet been fixed, but you can find out more on 0756 790554.

and multimedia workstation, but I'm not entirely convinced.

Are Commodore planning to release a portable Amiga? Sources close to the company certainly seem to think so.

## MORE A500 DELAYS

Users looking forward to the October launch of the A500 A690 CDROM drive are in for a disappointment.

According to Commodore MD Steve Franklin, the company had hoped to get the drive out in time for a Christmas launch, but it now seems that we won't actually see it until around February.

Although the drive is ready for mass production in the States, Commodore Users are having problems ensuring supplies for a Christmas launch.

The new drive will allow A500 owners to use CD-based software designed for the CDTV, opening up another market for CDTV developers.

There is still no news of a CDROM

drive for Commodore's other machines, the A1500, 2000 and 3000, although a drive for those machines should be on its way. According to a European developer, the new drive will fit inside these machines, giving A1500 owners a one-box solution.

Staying at Commodore, it seems that the company intends to up the standard specification of the basic A500.

Although the company is already selling the A500 with a half Mb RAM expansion, the new A500s will have the extra RAM soldered onto the A500 board.

Recent A500s already have this facility and Commodore have said to existing owners that it is capable of taking the extra RAM. They will be able to upgrade.

However, there is one big problem with this upgrade. According to several users who have already had the upgrade carried out by HRS (Commodore's parts supplier), the upgrade renders the trapdoor unusable.

As a result, such things as third party RAM expansions and even the KCS Power PC Board cannot be used.

Amiga users should also be able to upgrade their machines with the new enhanced chip set (ECS) but – once again – no firm dates or prices have been released, although sources close to the company believe that the upgrade should be available early next year.

Jason Holborn

## WHERE TO FIND A PD PC EMULATOR AT A CRAZY PRICE!

If you're after a PC emulator but can't quite stretch to the price of something like Silica's ATOnce or the KCS Power PC Board, then you may well be interested in a new PD PC Emulator just launched by Office Choice PD.

Written by prolific PD author Mark Tomlinson from New Zealand, the emulator was previously only available for use on 68020 equipped Amigas.

However, Mark has now produced a version which works on all 1Mb Amigas – even the A500!


The emulator fully emulates an 8088-based IBM XT with CGA 16-colour graphics.

What's more, it has one major advantage over Commodore's rather naff Transformer system – it multitasks.

Running under AmigaDOS, the emulator will allow you to run both Amiga and PC programs concurrently. Indeed, this is something that even the KCS Power PC Board will not do, although ATOnce does.

In its current form, the emulator does not directly support reading and writing of PC-format floppies.

Thankfully, Mark has fixed this too by including the PD MSDOS filesystem reader MessyDOS, although you can substitute this



WHEN IS AN  
NOT AN  
WHEN ITS A P.C

NOW CLICK YOUR LEFT  
WORLD OF THE INDUSTRY  
THE IBM P.C.

THE  
IPUTER

• If you want to run PC software on your Amiga, then you need IBeM!

with Consultron's CrossDOS.  
The overall standard of emulation is

surprisingly good, although the emulator still runs at snail pace. It's nowhere near the speed of ATOnce or even Commodore's own XT Bridgeboard for the 2000, but it compares favourably to Commodore's own Bridgeboard.

I managed to get such packages as dBASE III, WordStar and Lotus running without problems, although screen update is sometimes painfully slow.

In an attempt to reap some reward from his work, the version of IBeM that Mark has placed into the PD is only a demo. Although it is fully functional, it only allows you to use the program for 15 minutes before it locks up.

If you wish to obtain a fully unrestricted version, it will cost \$30 (Australian). Even at this price, I'm sure you'll agree that IBeM is still one hell of a bargain. By no means a serious alternative to a commercial PC emulator like ATOnce, but it does do the job. If you need to occasionally run PC software, then something like IBeM could be for you.

Find out more by phoning Office Supplies on 0236 737901.



## INSIDE INFO

ST

- Is Thunderhawk the next step in flight sims?
- You don't have to worry about the latest bug
- Create all the samples you'll ever need by editing them direct with Virtual Wave

**H**ave you got three tenners lying around doing nothing? Then put them to good use and get your mitts on a copy of *Thunderhawk AH-73M*. This is the new helicopter flight sim from Core Design and it's the best thing the company has done for a long time, if not ever.

The *Thunderhawk* is a fictional design, packing maximum firepower and a wicked turn of speed. You, as its pilot, are a member of MERLIN, an American international peace-keeping force. Your job is to visit various trouble spots around the world and quash small-scale disputes between various nations before they become large-scale and potentially world-threatening ones.

There are six of these trouble spots in the game: South and Central America, Alaska, the Middle East, Europe and South East Asia. Each may be easy, medium or hard, and they're all split into many smaller missions.

Before you set out on your mission of mercy (ahem) you're briefed on the overall situation and the specifics for this mission. You might, for example, have to take out a communications network first, followed by defensive weaponry and finally a central headquarters. Then you get to arm your chopper from an impressive array of weaponry: manual and automatic guided missiles, a cannon, bombs and even a runway cratering system (like the ones used during the Gulf War). This can even be done automatically for you if you can't be bothered.

The really stunning part comes when you first lift off in your chopper. The smoothness of the 3-D graphics surpasses anything previously seen in a flight sim for the ST, though to achieve this there's a certain lack of detail in the landscape. As you strafe the enemy encampments and bombard their convoys with missiles, you can see everything in detail from the external view which offers an almost unlimited number of angles. The controls are a little tricky at first, but they're much simpler than a real helicopter's would be, so the whole gunship can be controlled



• *Thunderhawk* is a stonking chopper sim that blows the opposition off the face of the map with its smooth graphics, detailed gameplay and excellent presentation. Travel and save the trouble-spots of the world

with the mouse alone.

Although it's great fun to play, the game is also accurate. At night you can't see anything except the lights in the buildings and the pretty stream of flak whizzing by your window – unless you switch on your night sights, that is. Even then nothing is visible in the map or external views. Crashed or destroyed vehicles lie in smoking ruins on the ground, ships sink when you bomb them and your gunfire actually obeys the laws of gravity.

As well as all this there's a wonderful animated intro sequence with cartoon-style animation and digitised graphics and sound, and even a simulator so you can practice flying without getting killed.

*Thunderhawk* really is a top quality game and for once is worth the £30.99 asking price. If you think six missions

sounds measly, think again, because there are enough sub-missions to keep you busy for a long while. Even a beginner should find it easy to get started and complete at least one mission.

Core Design lives at Tradewinds House, 69/71A Ashbourne Road, Derby DE3 3FS. ☎ 0332 297797.

### A NEW BUG

As if the world needed it, Cheetah has launched another joystick, with the rather worrying name of The Bug.

It was actually launched during the ECES by Fred Harris, "star of stage and screen", (no expense spared there, obviously) amid much silliness with go-karts and suchlike. Cheetah seems to be taking it very seriously, though, with posters, T-shirts, stickers and badges all bandied about – it'll be launching new

colours of floppy disks next.

Unfortunately Cheetah has forgotten to say very much about the darn thing at all, except that it's got a hand-held shape, autofire, microswitches and a metal shaft. A bit like 95 per cent of all the other makes of joystick, really. Anyway, it's £14.95 and available from Cheetah on 0222 867777.

### LIKE, VIRTUAL, MAN

Yet another MIDI program is about to be unleashed for the ST. *Virtual Wave* (for that is its moniker) is a software synthesis program which produces MIDI sample dumps to various samplers, which basically means it's a sample creator.

The program includes important-sounding features like Waveshape Interpolation Synthesis (lets you create smooth transitions in waveshape) and – wait for it – Free Fundamental Additive Synthesis, which means you can use an algorithm to create an almost endless number of waveshapes.

There's also Pitch and Amplitude enveloping, which is a boon in reproducing the sound of real instruments; an effects section (a little like those gimmicks – sorry, features – you get on cheap hi-fis) which make your sample sound like a chorus and suchlike; and the standard wave manipulation tools for splicing, pasting and smoothing your bits of sample.

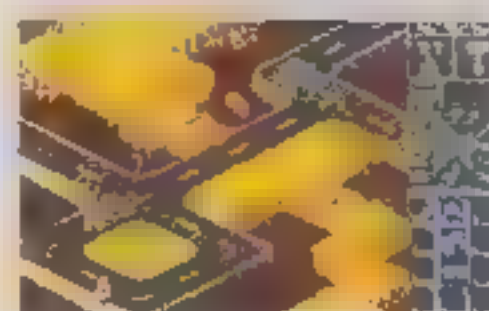
*Virtual Wave* currently supports the MIDI Sample Dump Standard, the Akai S900/950 and the Ensoniq EPS range, though more support is continually being added. It works on any ST (even on a 520 you can produce samples of over 1Mb in size) though you will need a monochrome monitor.

*Virtual Wave* costs £99.95 and is available from Resotek, 681 Wimbourne Road, Bournemouth, Dorset BH9 2AT.

☎ 0202 519216. **Ed Ricketts**

*Ed Ricketts is a games reviewer on ST Format, now officially the UK's biggest selling monthly magazine for the ST.*

## BRAT BUSTED WIDE OPEN



• Instant access to all levels of *Brat* with these essential passcodes.

Here are the level codes to Imageworks' anti-cute game

#### • Toyland

LEVEL 1: BIGHIMO  
LEVEL 2: MIHEMOTO  
LEVEL 3: SASUTOZO  
LEVEL 4: SUMATZEE

#### • Parkland

LEVEL 1: NOKITAGO  
LEVEL 2: ITSANONO

#### LEVEL 3: MOZIMATO

#### LEVEL 4: HOZITOMO

#### • Moonbase

#### LEVEL 1: MOKITEMO

#### LEVEL 2: ZUMOHATO

#### LEVEL 3: CHANASTU

#### LEVEL 4: NAGAITSU

## KEEP IT IN THE FAMILY

What could be US Gold's first decent licence (I just know I'm going to get into trouble for saying that) is nearing completion. *The Godfather – The Action Game* takes scenes from three *Godfather* films and puts them into one big action game (hence, as they say, the name). It's been in development since November last year and is going to be one huge game.

Creative Materials is handling the game and the graphics are being done by veteran graphic artist Pete Lyon. The game will feature at least four levels, with many sub-levels, each including digitised sound and some beautifully-drawn backgrounds.

Although it is mainly arcade-based, there are adventure elements (certain objects have to be found for you to progress) and some decision/interaction sections making use of icons.



• Ho ho! Another hilarious scene from the rollicking family comedy *The Godfather*.

The settings for each level range from 1940s New York in level one, to Havana in the 1960s in level three and a motor launch in Miami in the 1970s for level four.

Details on other levels and gameplay are still quite sketchy, but suffice it to say that it looks as though *The Godfather* will be a main contender for the top seller this Christmas (if it's finished by then).

Of course, you may think (like me) that the whole idea of glamourising the Mafia in this way (who, after all, are nothing more than extortionists, cowards and murderers) stinks somewhat. Unfortunately the Mafia already has a larger than life image which distances it from what it actually does: kill people who get in their way. If the game had you playing a Nazi during the Second World War, would you buy it?





## NEW! CARTOON CLASSICS PACK

### HARDWARE:

512K AMIGA 500	£329.99
A520 TV MODULATOR	FREE
A501 RAM EXPANSION	£99.99

### SOFTWARE - ENTERTAINMENT

BART SIMPSON	£24.99
CAPT PLANET & PLANETEERS	£25.99
LEMMINGS	£25.99

### SOFTWARE - PRODUCTIVITY

DELUXE PAINT III	£79.99
PLUS! FREE FROM SILICA	
ARCADIE ACTION PACK	£229.78
PHOTON PAINT 2.0	£89.95

TOTAL RRP: £906.67

YOU SAVE: £507.67

**£399**

PLUS! 16 NIGHTS FREE HOLIDAY ACCOMMODATION

SILICA PRICE - INC VAT + FREE DELIVERY



# AMIGA

## STAND-ALONE 500 COMPUTER

- 512K AMIGA ..... £329.99
- TV MODULATOR ..... FREE
- MOUSE CONTROLLER ..... FREE

PLUS! - FREE FROM SILICA

- ARCADE ACTION PACK .... £229.78
- PHOTON PAINT 2.0 ..... £89.95

TOTAL RRP: £649.72

YOU SAVE: £320.72

**SILICA PRICE: £329**

PLUS! FREE HOLIDAY ACCOMMODATION

**£329**

SILICA PRICE - INCLUDES VAT + FREE DELIVERY

## FREE! FROM SILICA WITH EVERY

## ARCADIE ACTION GAMES PACK

The new Arcade Action Games Pack is THE software compendium for Amiga owners, featuring ten top titles with a variety of different types of games for you to enjoy. Each title is packaged in its own plastic case, with a colour sleeve and full instructions. The Arcade Action Pack is FREE! when you buy your Amiga 500 from Silica.

**FREE! WORTH: £219.78**



## ARCADIE ACTION GAMES PACK

## FREE! PHOTON PAINT 2.0 GRAPHICS PACKAGE

Every Amiga 500 from Silica Systems comes with a FREE Photon Paint 2.0 (RRP £89.95), one of the most advanced art packages available for the Amiga. With it, you will be able to harness the extraordinary graphics power of the Amiga and produce inspirational pictures in minutes. With 4096 colours, your pictures will reach life-like appearance. These can be animated in real-time using a vast range of graphical effects, including blending colours and dithering, stencils, shadowing, contour mapping and surface mapping.

**WORTH £89.95**



## FREE! 16 NIGHTS HOLIDAY HOTEL ACCOMMODATION

Every Amiga from Silica comes with a FREE 72 page, full colour brochure with accommodation vouchers. These vouchers entitle 2 people to stay up to 16 nights in one hotel (or any number of hotels to a total of 16 nights) with accommodation FREE (you could take up to six nights for four people, or other options). Choose from the 250 hotels featured in the catalogue. All you have to pay for are your meals (prices are listed in the brochure). Reduced rates in top London hotels and hotels in France are also featured.



# AMIGA

## TOTAL FREE PACKAGE

### ARCADIE ACTION PACK - £229.78:

Asterix - By Coktel Vision	£24.99
Chess Player 2150 - By CP Software	£24.95
Drivin' Force - By Digital Magic	£24.95
Live & Let Die - By Elite	£19.99
Onslaught - By Hewson	£24.99
Pipe Mania - By Empire Software	£24.99
Rick Dangerous - By Firebird	£24.99
Rock 'n' Roll - By Rainbow Arts	£19.99
Skweek - By US Gold	£19.99
Trivial Pursuit - By Domark	£19.95

### ART PACKAGE - £89.95:

Photon Paint 2.0 - By Microware	£89.95
---------------------------------	--------

TOTAL RRP: £319.73

**FREE! WORTH NEARLY £320**

PLUS! FREE HOLIDAY ACCOMMODATION

## SILICA SYSTEMS OFFER YOU

- **FREE OVERNIGHT COURIER DELIVERY:** On all hardware orders shipped in the UK.
- **TECHNICAL SUPPORT HELPLINE:** Team of Amiga technical experts at your service.
- **PRICE MATCH:** We normally match competitors on a "Same product - Same price" basis.
- **ESTABLISHED 12 YEARS:** Proven track record in professional computer sales.
- **BUSINESS + EDUCATION + GOVERNMENT:** Volume discounts available for large orders.
- **SHOWROOMS:** Demonstration and training facilities at our London & Sidcup branches.
- **THE FULL STOCK RANGE:** All of your Amiga requirements from one supplier.
- **FREE CATALOGUES:** Will be mailed to you with offers and software/peripheral details.
- **PAYMENT:** By cash, cheque and all major credit cards.

Before you decide when to buy your new Amiga computer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after buying your Amiga, when you may require additional peripherals or software, or help and advice with your new purchase. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for over 12 years and, with our unrivalled experience and expertise, we can now claim to meet our customers requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest Free literature and begin to experience the "Silica Systems Service".

**MAIL ORDER HOTLINE**  
**081-309 1111**

**SILICA SYSTEMS**



<b>MAIL ORDER:</b>	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX	Tel: 081-309 1111
Order Lines Open: Mon-Sat 9.00am-6.00pm	No Late Night Opening	Fax No: 081-308 0608
<b>LONDON SHOP:</b>	52 Tottenham Court Road, London, W1P 0BA	Tel: 071-580 4000
Opening Hours: Mon-Sat 9.30am-6.00pm	Late Night: Thursday until 8pm	Fax No: 071-323 4737
<b>LONDON (SELF-TRADING):</b>	1st Floor, 369 Oxford Street, London, W1A 1AB	Tel: 071-629 1234
Opening Hours: Mon-Sat 9.30am-6.00pm	Late Night: Thursday until 8pm	Ask for extension 3914
<b>SIDCUP SHOP:</b>	1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX	Tel: 081-302 8811
Opening Hours: Mon-Sat 9.00am-5.30pm	Late Night: Friday until 7pm	Fax No: 081-308 0017

To: Silica Systems, Dept NCE-1091 - 60, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

## PLEASE SEND FREE AMIGA COLOUR CATALOGUE

Mr/Ms/Ms: ..... Initials: ..... Surname: .....

Address: .....

Postcode: ..... Tel: .....

Which computer(s), if any, do you own? .....



## PC

- New products bonanza for Lotus 1-2-3 users
- Make your graphics come alive with *PC Animate Plus*
- Exclusive pics from Ocean's next big flight sim
- Intel to flood the market with new 486 machines

**T**here is a whole host of Lotus 1-2-3 for Windows add-ons due from the States in the near future:

- Intex Solutions' *CFO Spreadsheet Applications* is a collection of templates that covers many common financial calculations. *CFO Spreadsheet* is priced at \$99.95 for a six-template module and \$299.95 for the full set.
- Individual Software's *Power Macros for the 1-2-3 User* is a collection of more than 150 macros. The \$49.95 *Power Macros* includes a tutorial for using macros and the capability to store macros in a library.
- First Byte's *Monologue for Windows* is a \$149 voice synthesis package that can read aloud rows, columns, and formulas through the internal PC speaker or any audio peripheral.
- Arkay Technologies will also offer a voice synthesis product for 1-2-3 for Windows. Its *PC-Sound* works with the *PC-Recorder* to digitally record voice and sound effects for playback through the *PC-Soundport* amplified speaker. The *PC-Soundport* speaker installs directly into the printer port, eliminating the need for opening up the computer. *PC-Sound* and *PC-Soundport* are available for an introductory price of \$98. *PC-Recorder* is \$198.
- Anderson Soft-Teach is releasing *Video Training for 1-2-3 for Windows* for \$995.

In addition to announcing the array of add-in products, Lotus also unveiled its *1-2-3 for Windows Add-In Development Kit*. The \$249 kit includes tools that let developers create custom applications that work directly with 1-2-3 for Windows.

### WINDOWS NT

Alpha copies of Windows NT have, apparently, been released by Microsoft to a few select developers for testing. The developer's kit of the 32-bit

operating system is scheduled to ship by year end. Alpha users praised the early code, and said it supports new 32-bit Windows calls but does not yet run 16-bit applications.

☎ Contact Microsoft on 0734 500741.

### NEW 486S

Intel has expanded its line of 486SX processors with the addition of 16MHz and 25MHz versions to complement the original 20MHz version introduced earlier this year.

It appears that Intel's strategy is to flood the market with 486 designs at different price/performance levels. This could accelerate the industry's move from the 386 to the 486. Intel also tweaked the design of its 487SX math coprocessor, enabling it to run at 16MHz, 20MHz, or 25MHz.

### CHIPS AND CHIPS

Chips & Technologies will join the Intel-compatible 386SX and 386DX chip markets later this month with four microprocessors, a move that should give buyers more system choices and lower prices.

C&T will unveil its Super386 38600DX and 38605DX lines with processing speeds ranging from 25MHz to 40MHz as well as the 38600SX and 38605SX chips with speeds ranging from 16MHz to 25MHz on September 30.

The four product lines, all of which use C&T's new Chip System Architecture, are divided into pin compatible and extended-pin compatible families. The 38600SX and 38600DX are pin-for-pin replacements and provide a 10 per cent speed boost over the current 386 architecture, and the 38605SX and 38605DX chips have an extended pin-out configuration to give developers a 40 per cent speed gain.

The Super386 38605SX and 38605DX processors add an integrated 512 byte instruction cache and on-chip logic that helps to work 40 per cent faster

### DOS 5 CORNER

● **The problem:** You've just installed DOS 5. However, using Windows 3.0 causes your PC to freeze.

● **The cause:** Could be a conflict with your video memory

● **The solution:** Try, if you are using EMM386.EXE, to have the 'x=' parameter on the command line to allocate your video board a particular 'address' for its own memory (ie, x=C000-C800). Check out the DOS 5 manuals to find a usable address for your board.

### ACCU-PICTURE

*AccuDraw 2.1*, from American software house AccuSoft, supports *WordPerfect's* extended character sets, ruler scale setting, and measurement for CAD (Computer Aided Design) functions. The \$195 software includes a built-in pixel editor, export of CGM and PCX files, full-screen drawing, an information window, and bit-map support. Upgrades are \$49.95.

☎ Contact AccuSoft on 0101 508 898 2770.

### A JOURNO WRITES

If you would like to write to liddle ol'me to tell all about new products, pass on a hint or three, moan or praise a new product or game, then address your prose to Paul Rigby, *New Computer Express*, Future Publishing, 30 Monmouth Street, Bath BA1 2BW.

than existing 386s. The company is also expected to demonstrate a 40MHz Super 386 38605 that is capable of processing at a speed of 11 million instructions per second.

As part of the rollout, the company will unveil the PC/Chip, a single 14MHz 8086-compatible processor, with IBM-XT

equivalent logic, a Colour Graphics Array-compatible flat panel/CRT controller, a serial port, and built-in power management. C&T believes PC/Chip will enable vendors to build extremely low-cost notebook and palmtop systems, as well as embedded controller systems.

Samples of the 386 clones will be available in October, and production versions will be ready in the first quarter of next year.

### RING MY CEL

Presidio Software has announced *PC Animate Plus*, a \$199.95 8-bit two-dimensional animation and paint program. *PC Animator Plus* is intended to go head-to-head with Autodesk's *Animator* program, according to Brown-Waugh, the product's distributor.

The software supports Creative Labs' *Sound Blaster*, a PC MIDI-capable sound card, and a range of pixel resolutions. The built-in drawing and paint tools can use a palette of 256 colours at VGA resolution. Animation techniques are grouped into four categories: frame, pixel, sound, and palette. Effects include frame rotation for a 3-D look, pixel manipulation, and various textures.

Its features, which include zoom editing and animated cel capability, can be accessed via pull-down menus, pop-up dialogue boxes, buttons, and slide bars.

*PC Animator Plus* uses a proprietary format but can import the GIF, TIFF and PCX formats used by most paint programs, and includes a converter for *Animator's* FLI format.

*PC Animate Plus* is distributed by Brown-Waugh as part of its *Multimedia Recipe*, a suite of related mixed-media products that includes the *Sound Blaster* board.

☎ Presidio Software is on 0101 415 474 6437.

Paul Rigby

## TAKING COMMAND OF A STRIKING GAME



In *Strike Commander* you battle on behalf of your country commanding Stern's elite Wilcats engaging third-world dictators, neo-nazis and the armies of the IRS - all in the course of duty!

From Origin, hot on the heels of the very wonderful *Wing Commander II* is *Strike Commander*. Set in a near future scenario, where the IRS (the American tax department) has taken over the government you fly in a rebel force against it. A thoroughly worthy and moralistic cause for a game if ever there was one.

*Strike Commander* promises to become another massive game requiring a basic 2Mb of RAM plus 15-20Mb of hard disk space to run. However, with the new in-game models created using Autodesk 3D (see game shots) covered in sparkling bit-maps, is it any wonder?

To be published by Mindscape in the UK, *Strike Commander* should be out sometime during January 1992.



**ATTENTION****£1.50****INC****J.T.S. SOFTWARE****SHAREWARE****PUBLIC DOMAIN****ATTENTION****£1.50****INC**

**TOP QUALITY SHAREWARE WITH HELP JUST A PHONE CALL  
AWAY IF NEEDED**

**NO MINIMUM ORDER 3.5" OR 5.25" THE SAME PRICE.**

**VAT AND POSTAGE INCLUDED**

**WITH OVER 400 CAREFULLY SELECTED PROGRAMS TO CHOOSE FROM  
ORDERS PHONE 0274 678198 24 HR DISPATCH**

**WORDPROCESSING**

GALAXY LITE, Ideal for beginners  
PC WRITE With split screen & macro  
PC TYPE 4 Advanced WP  
MINDREADER Powerful WP  
BLACK MAGIC Hypertext WP  
CLICHE FINDER Improves your style

**DISKS**

(1)  
(1)  
(3)  
(1)  
(3)  
(2)

**DATABASES**

PC FILE V Competes with the best  
SR-INFO Relational database manager  
ZEPHYR This database is fast  
WAMPUM Reads dBase files  
CARD INDEX A simple filling system  
CATALIST Powerful mailing list manager

**DISKS**

(3)  
(2)  
(3)  
(2)  
(1)  
(2)

**SPREADSHEETS**

AS-EASY-AS 123 Style spreadsheet  
PC CALC + Multi-feature spreadsheet  
123 TUTOR For 123 beginners  
LOTUS WORKSHEETS 3 Worksheets  
FREECALC Good for beginners

(1)  
(3)  
(1)  
(1)  
(1)

**DRAW/PRINTING**

PC KEY DRAW Popular cad package  
ONside Print sideways on 9 pin printer  
BRADFORD LQ form 9 pin printer  
FONTASTIC Fonts galore +  
T SQUARE Fantastic cad package

(4)  
(1)  
(1)  
(1)  
(4)

**SPECIAL OFFER BUY 10 DISKS FOR ONLY £12**

**VAT & CARRIAGE INC**

**WHY PAY MORE**

**FREE CATALOGUE WITH FIRST ORDER**

**J.T.S. SOFTWARE, 83 St Enochs Road, Wibsey  
Bradford, W. Yorks, BD6 3AD. Phone:- 0274 678198**



# PHONE NOW FOR FREE CATALOGUE

WE HAVE OVER 1600 TITLES LISTED

Games, Demos, Utilities, Music, Adults Only and many more

0432 341879

## GAMES

0670 Monopoly  
0595 Caverunner  
0843 Metagalactic Games  
1043 Letrix  
1020 Master of Town  
0849 Holy Grail  
1382 Terror Lines II (18)  
0126 Star Trek A 1 meg  
0127 Star Trek B 2 drives  
0128 Star Trek C Game  
1389 Star Trek Next Gen  
1446 Return To Earth  
0853 Golden Fleece  
0856 Xenon 3  
0936 Auto Bahn 3000+

## DEMOS

1117 Budbrain Megademo  
0439 Fantastic Demos  
0587 Brainwave  
0559 Deadly Pursuits  
0993 Hellish Megademo  
1337 Sam Fox  
0933 Mike Tyson 1 meg  
1355 Techno Flight  
1142 Amaze  
1460 Do The Bart Man  
1591 Flimbos Quest Demo  
0454 Dragons Megademo  
0469 Beastie Boys Demo  
0593 Thunder Birds Demo

## UTILITIES

0671 Rim Database  
0631 202 Utilities  
1208 D.B. Wiz  
0333 Voices 8  
0065 Demo Maker  
0654 Video Applications A  
0655 Video Applications B  
1508 Ami Base  
1162 Home Utilities  
0857 Clip Art  
1078 Essential Utils 2  
0659 Essential Utils 1  
1146 Icon Magic  
1151 C-Light

## ANIMATIONS

0014 Walker Anim 1 meg  
0015 Walker 2 Anim 1 meg  
0538 Dragons Lair 1 meg  
1103 Iraq Demo  
1095 Batman Movie 1 meg  
0155 Space Ace Demo  
0196 Puggs in Space Demo  
0524 Juggler Etc  
0927 Swinging Frog Anim  
1079 5 Ways to Kill a Mole  
1100 Bruce Lee Demo  
1201 Another 5 Ways to Kill a Mole  
1214 Madonna Anim 1 meg  
1123 Robocop Digi Movie  
1169 Millenium Animation

Games Galore 1-4 (4 Disks Set) £4.00. Huge Range of Adults Selection on Catalogue.

This is just a selection of our range. All P.D. is £1.25 per disk. Buy 10 pick 2 FREE

Send P.O.'s or Cheques to P.M. Rowe. Add £1 P&P. Over £20 FREE.

**P.M.R SOFTWARE**

**P.O. BOX 147,**

**HEREFORD, HR2 7LS**

RING NOW FOR OUR FREE 1600 TITLE CATALOGUE. ALSO IN CATALOGUE JOYSTICKS, DISKS, STORAGE BOXES, EXPANSIONS, EXTERNAL DRIVES + MUCH MORE. 0432 341879. 24 Hour despatch on cleared funds.



# AMIGANUTS UNITED

169 DALE VALLEY ROAD, HOLLYBROOK,  
SOUTHAMPTON, SO1 6QX.



Worldwide distributors of the dedicated Amiga Coders Club disks.  
European distributor for the world famous T.BAG disks from Merlin Software

## THE NEW (1Mb) EIGHT CHANNEL MIDI COMPATIBLE Octamed V2 IS HERE!!!

It now contains full notation, including a notation editor with notation printing, 5-7 channel modes for high quality, non-CPU stressing audio/split channels, sixteen track display for Midi use and a host of other new MIDI features. The new V3.20 of the PD four channel Med is also encoded into the program. Price is £20.00 for European countries, (£25.00 for non-European), inc VAT but not post/packing. Payment in pounds sterling only. If ordering from overseas send a bankers order/Eurocheque etc. (Credit card orders will not be accepted). **IMPORTANT NOTICE TO ALL REGISTERED PURCHASERS OF Octamed V1** If you return your original Amiganuts disk, containing V1, you can have V2 for HALF PRICE, (ie. £10.00 Europe). **REMEMBER**, you must return your original V1 copy. **EVERY ORDER FOR V2 WILL BE ENTERED INTO THE Octamed V2 FREE PRIZE DRAW**

1st Prize: Golden Image Hand Scanner

2nd Prize: LCD Colour TV 3rd Prize: £50.00 of progs.

Master Virus Killer 2.2 is here. Also recognises the dreaded Saddam virus! £5.00  
Bug-Bash: Kill the bugs, clean up the trash in the garden. A great kids game. £3.00  
877: 1 Across 2 Down. A fully fledged crossword program (Data disk no.1 supplied free) for only £5.00. Data disks 2, 3, 4 and 5 now ready at £2.00 each.  
1038: Super Amidash. Do you remember Boulderdash? Relive the fun again. 1Mb. £3.00  
1068: Mod Processor V1.92. Make picture

and/or music progs. adjust pic height/width. This version will load the new 8 Channel Octamed music and excellent £3.50  
1078: MED V3.20. The latest 4 Channel PD version of this great music utility £3.00  
1102: The Sprite Designer. A good way to draw/save Sprites. By Frank Tout. £3.50  
1139: The Advanced Screen Designer. (A boon to all you programmers out there). £3.50  
1161: Intimenu V3. The easy way to execute your programs. Treat yourself! £4.50

## SUBSCRIBE SUBSCRIBE SUBSCRIBE SUBSCRIBE SUBSCRIBE

If you would like to get hold of the Amiga Coders Club disks as soon as they are published, why not send £33.00 and ask to go on the ACC mailing list now? We will send you each issue as soon as it's ready (applies to issue 14 onwards). If ordering from outside the European Community, add an extra £6.00 for postage. Please note that issues released prior to ACC 14 must be purchased separately.

If you would like to take out a years subscription for the T.BAG disks, (applies to issue 50 onward), simply send £33.00 and we will send you each issue well in advance of them becoming available from any other supplier. (Note that issues 50 to 55 are ready now and will be sent upon joining). Issues released prior to T.BAG must be purchased separately @ £2.00 each. If ordering from outside the European Community, add extra £6.00 for postage)

### MIKE SIMPSON'S A-GENE V3.28

(full version) is now available directly from us.  
Price: Europe £15.00. Rest of World £20.00.  
Simply the best Genealogy prog.

### AMIBASE PROFESSIONAL III is here!

The additions to this new two disk version database program make it a must have. It is excellent. £10.00 EC - £15 R.O.W.

Excluding the T.BAG and disk 1178, none of the above programs are Public Domain. Prices include V.A.T. but add the following to your order for return postage: - All EC Countries (inc. UK), add 50p - Non EC £1.00 - Rest of world add £2.00. Final 1991 catalogue is ready, send for your copy now! £1.00 (includes post/pack)

69p

# SPECIAL OFFER AMIGA PD

69p

YES IT IS TRUE PD FOR JUST 69p - OFFER ENDS 31/12/91

HERE IS A SMALL SELECTION FROM OUR VAST RANGE

OVERSEAS ORDERS ADD 25p A DISK FOR EUROPE 60p R.O.W.

ENQUIRIES TEL:

0424 712349

## DEMOS

D113) Silents Scroller  
D115) Utopia Cartoon Slides  
D117) Bunsen Burner  
D119) The Link Megademo  
D122) Ghost Pool  
D124) Scoopex Seven Sins  
D126) Disney Slideshow  
D128) Sleeping Bag Demo  
D130) System 5 Demo  
D132) Alpha Flight Megademo 2  
D134) Share And Enjoy 46  
D136) Thames TV Demo  
D138) Vision Megademo  
D140) Fast Cars Slideshow  
D142) Mobed  
D145) Kefrens Wall Demo  
D147) Beast 2 Preview  
D149) Treacl  
D151) Share and Enjoy 47  
D153) Simpsons Mini Mega (XXX)  
D155) Glass World Animation  
D157) Congaman Animation  
D160) Anarchy Scratch Pack 39  
D162) Bugs Bunny Anim\*  
D164) Smurf + Cokeman Anims\*  
D166) Juggette Animation

## UTILITIES

P02) A68K Assembler  
P04) North C  
U001) Jazzbench  
U004) Visicalc Spreadsheet  
U006) Intro Maker  
U008) Sidney And Friends  
U011) XLS Disk 1  
U013) Clip Art  
U015) The Magicians Utilities  
U017) Steel Moon Utilities  
U019) CADV  
U021) Super C Disk  
U024) Red Devil Utils 4  
U026) Amibase V3.76  
U031) Bootbench  
U033) C-Light 1+2  
U035) System Checker  
U037) Tetra Copier  
U053) Text Plus Wordprocessor  
U056) Wordwright Wordprocessor  
U058) Running Man Update  
U060) Mag Media Disk Utilities  
U062) New Age Utilities  
U063) Pendle Europa Utils  
U065) Fonts  
U067) ICPUG Printer Utilities  
U069) XLS Best Of PD 3

## GAMES

G004) Breakout Construction Set  
G006) Star Trek (2)  
G008) Drip \*  
G010) Quiz Master 2  
G012) Popeye  
G014) Tennis \*  
G016) Flaschbier  
G018) Treasure Hunt  
G020) Wet Beaver Games  
G022) Workbench Games And Hacks  
G024) PD Games Compilation  
G026) Movie Games  
G028) Eatmine  
G030) Return To Earth  
G032) Klondike  
G034) Trek Trivia  
G036) Pipeline  
G019) Battleforce  
G021) Arcade Games  
G023) Star Trek The Next Gen.  
G027) Hack  
G029) PDOM Games  
G031) BIP  
G033) Stoneage  
G035) Jeopardy  
G041) Frantic Freddy  
G045) Llamatron

## DISK CATALOGUE

50p

CONTAINS DETAILS OF ALL OUR DISKS AND IS UPDATED FREELY WITH EVERY ORDER. INCLUDES 2 FREE GAMES + A DEMO

We also stock APDL, Amicus, T-Bag and Fred Fish Disks.

All orders dispatched within 24 hours.

Buy now while the price is so low

Please add 50p postage + packing to all orders.

PLEASE MAKE ALL CHEQUES AND POSTAL ORDERS TO S.P.D.

**S.P.D. 62 MANOR ROAD, HASTINGS, E.SUSSEX, TN34 3LJ**



# THE PD COLUMN

Used to help any model that does to damage your hard disk! This week James Lynch brings you the king of virus killers, plus games, education software and utilities for your machine.

The wacky, fun-loving world of Public Domain permanently has one dark cloud over it. Catching a virus. There can't be anyone with a home computer who isn't aware of the dangers of viruses, but every time you slot a disk into your machine, you run the risk of putting one of these nasty, destructive programs into your machine's memory.

The safest way to deal with them is to turn off your computer for at least 30 seconds after inserting any disks you consider to be vaguely dodgy. It's impossible for a virus to remain resident in the memory of a computer once it's been switched off for more than a few seconds, so you'll be safe. And while we're on the subject, remember to write protect all your disks. Nothing nasty can creep into a disk that's been write protected in this way.

## DON'T DIE OF IGNORANCE

The PD world is also doing its bit to stop the spread of viruses. NBS Public Domain has recently released a utility disk called *The Beginners Guide To Virus Hunting*. It's for any Amiga, and NBS has recognised that killing viruses isn't as easy as it should be. To this end they are worried that "There are probably more disks destroyed by the incorrect use of a virus killer than by the viruses themselves".

Most virus killers check the boot sector of the disk (where viruses reside). If there is anything slightly out of the

ordinary in the boot sector, the virus killer jumps up and down on it until it is dead. This is fine, unless the disk is supposed to have that modified boot sector. If this is the case, you might just have unwittingly trashed a perfectly usable and virus free disk! What *The Beginners Guide To Virus Hunting* does is check the computer's memory after the disk has been used. If it finds anything, it will confirm that there is a virus, tell you what sort it is and try to remove it. If anything goes wrong, the disk itself will remain unharmed.

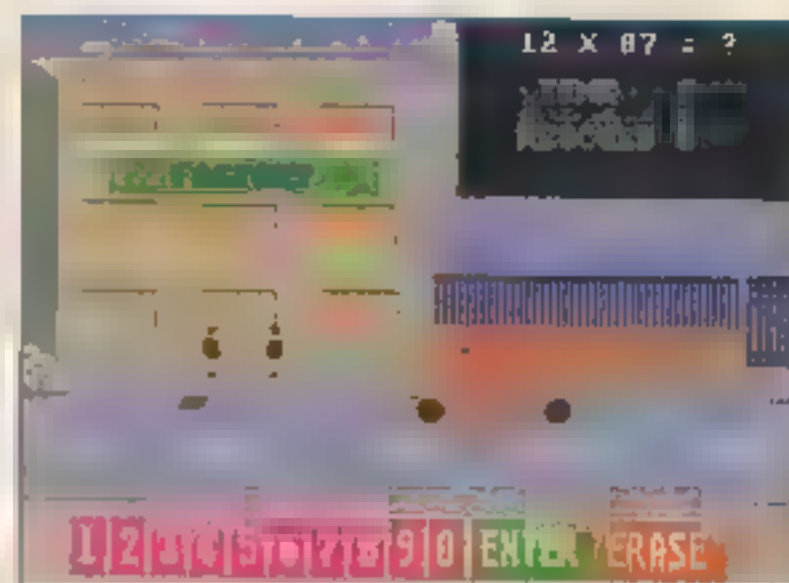
The *Beginners Guide* disk contains two virus-hunting programs. The first is a brand new version of *Vectacheck* (which hunts through the memory of the computer) and *Nuke*, which will destroy most known viruses, including the latest and extremely nasty 'Saddam Hussein' strain.

Also included on the disk is a pretty comprehensive summary of what a virus is, how and where they operate and even a database of dozens of known viruses with details of where they were found and what they do to your system if they get a chance.

I wholeheartedly recommend *The Beginners Guide To Virus Hunting*, and anything which educates users about viruses and protects their systems at the same time has got to be worth getting hold of.

## VECTOR VICTORS

Also from NBS PD are three class



• Teach your child to do sums by using dangerous fictional situations

demos for the Amiga. *Voyage* sees you zipping around a vector landscape, narrowly avoiding all sorts of light sourced vector objects as you fly between the various sections of the demo. It's fast, it's fun and it isn't polluted by too many scrolly messages.

*Labyrinth* is from a French crew called the Devils. It's another vector job and includes all kinds of weird 3D fractal trees and so on. There's a rather nice 3D Starship Enterprise viewed from three angles simultaneously, and a great soundtrack.

Also from the Devils is *No Reality*. More vectors, tons of graphical effects you didn't think were possible on the Amiga and even some Julia and Mandelbrot sets to keep the Chaos-fans happy. Demos are definitely improving, and if they ever dispense with the scrolly text altogether I'll be a fan for life.

NBS has an interesting collection of animations as well as demos. Two of the



• It's that annoying Sega talking TV, now appearing on your Amiga

best are *Yet More Classy Animations 5* for the Amiga, and *ATF Agility (Another Stealthy Manoeuvre)*.

*YMCA 5* is the last in the *Yet More Classy Animations* series. The best thing on the disk has got to be *Chuck's Revenge 2*. This sees Chuck (your average cartoon character) managing to gain his vengeance and destroy a stealth bomber. Why he wants to do this isn't altogether clear, but it's fun to watch. Chuck (created by ace artist Steve Packer) also appears on another animation on the disk.

*ATF Agility* is just as strange, and also features aircraft. A miserable, grumpy bomber called, says NBS, Cyril gains the unwanted attentions of a young fighter. The upstart is soon put in his place, and you come away from the animation a sadder and wiser person.

Certainly more sensible is a release on the Amiga from PD Soft of an educational program called *Maths*. It has a wide array of graphics and is obviously designed to encourage small children to do subtractions, multiplications, addition and division quickly and accurately. Various everyday scenes are displayed, all with a maths-related problem. For example, there's a fire at a building and whether the trapped occupants can leap to safety in a fireman's net depends on whether you are able to do the sums before they are engulfed in the flames. It's tastefully done, though. Again, *Maths* is licenceware, and requires a small payment to PD Soft (which is passed on to the programmer) before it'll send you a copy.

PD Soft also has *VMK* for the Amiga. It's another highly rated virus killer. It isn't quite as easy to use as *The Beginners Guide To Viruses*, but if you use it carefully, it does the job swiftly and efficiently. Ideally, you could both virus killers in your armoury.

And finally from PD Soft is a demo of the *Sega* advertisement on TV. In the unlikely event that you've fallen in love with that talking, multi-coloured TV, you could see him (or it) in the time on your Amiga with this remarkably accurate version. Things to make demos about must be quite thin on the ground at the moment.

## SWIMMING IN THE BIG POOL OF INFORMATION

Merton PD is another rapidly growing ST library. The company has sent in their catalogue disk which, as well as giving information about the range of programs, also includes a rather playable little number called *8 Ball Pool*. Jimmy White's *Whirlwind Snooker* it ain't, but it is a lot of fun, and is certainly an incentive to get hold of the catalogue disk from Merton.

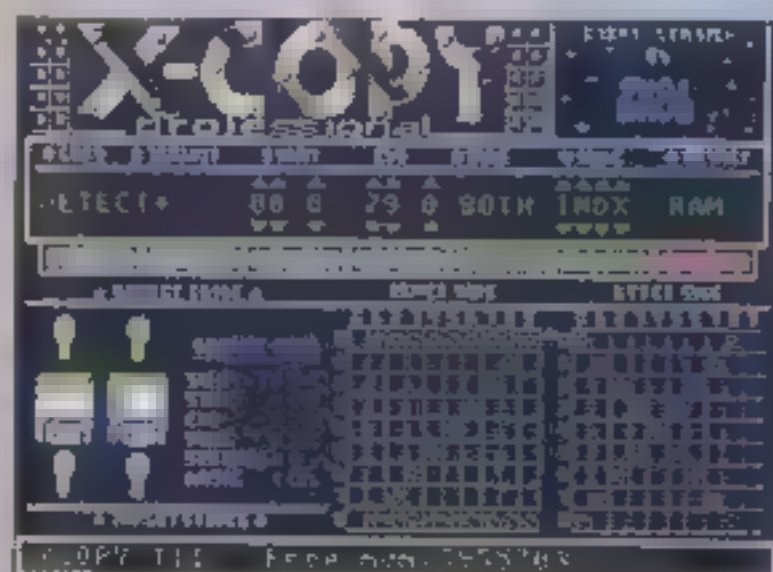
Merton also differs from many PD libraries in that it keeps all the utility programs separate and the customer can choose up to five different ones to be copied on to one disk at no extra cost. So you only get the software you want. Two single-sided disks may be compiled on to one double-sided disk by Merton for only 50p, too, so whichever format you use, there'll be something for you.

All disks are dispatched the same day as the orders arrive, and they're sent first

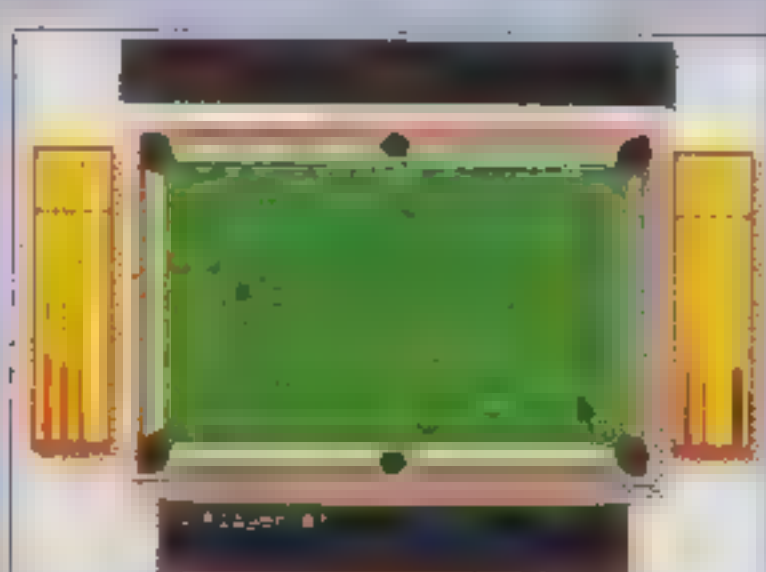
class (at no extra cost). The catalogue disk (with *8 Ball Pool* on it) only costs a quid, too.

Merton also provide useful back-up programs for floppy disks. It's a bit of a dodgy area, this, but piracy notwithstanding, there is of course a sound reason for backing up all your disks, PD or otherwise. The programs are *CopyPro*, *Offbeat's Duplicator v1.2* and *Xcopy v1.3*. Each has a user-friendly front end and you just follow the instructions for (hopefully) perfect results every time. So you need never lose important data again.

Nightshift PD has launched into a nostalgia trip back to the days when everybody was into Thrash metal. The disk is called, predictably, *Thrash It*, and has three demos varying, erm, interest to fans. The programmers are a knitting circle called The Slaytanic Cult and it only runs on the STE.



• X Copy also features hip and trendy Jean Michel Jarre music



• Can't afford a pool table? 8-ball Pool from Merton is the answer



• Backing up your most important disks is made easy with Duplicator



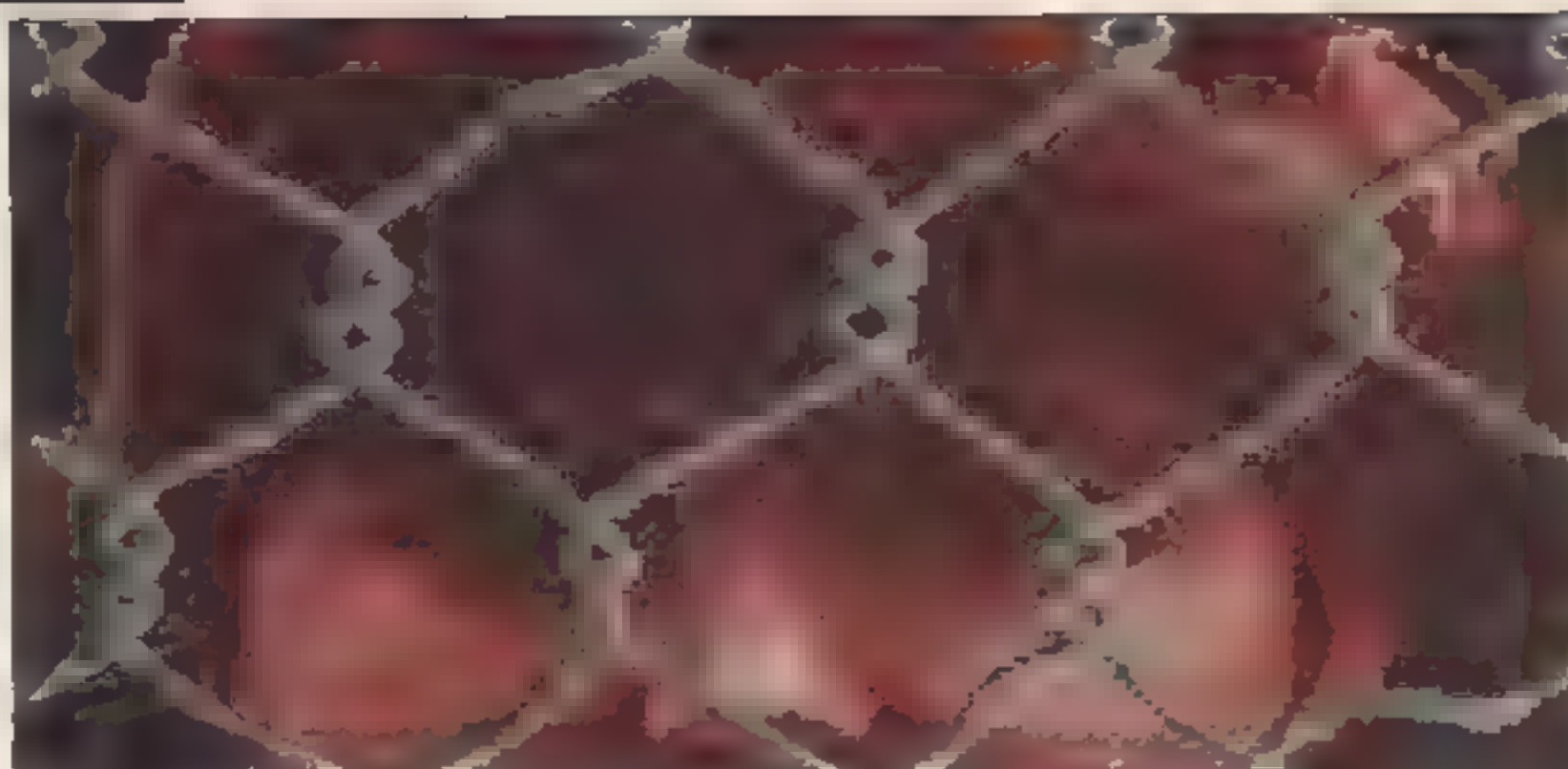
## PUBLIC DOMAIN

## GAMES WITHOUT FRONT EARS

Games which fall into the category 'not-to-be-taken-too-seriously' from NBS (all for the Amiga) include **Super Skoda Challenge** (which runs in 1Mb). The screen is split into four and four players simultaneously drive their Eastern European cars around, shooting each other (having first selected their armaments).

Each player only sees the area immediately around his car, but of course can cheat by looking at the other players' screens. There are ten different screen layouts and you also get a map editor so you can, if the urge takes you, produce more. It's a lot of fun (if you have three unfussy pals).

**Worms** also runs in 1Mb. It's that old fave, **Tron** again. But here you can have up to four players on the light-cycles, and the trails left by them aren't fixed (as in all the other Tron clones I've seen) but start off short and gradually



A bit depressing, but nice graphics nonetheless. And it's on Tbag 58

grow longer as you move around the screen. There's a fun soundtrack, and with more than two people it gets really rather exciting.

Running on any Amiga, **Battle Cars** gives you a solid 3D arena and an armoured car. You must chase the computer controlled car around, trying to blast it with your cannon. So far so good, but the real excitement comes when you link up another Amiga using a null modem cable, so you are actually fighting your pal. A good idea, that. There aren't enough PD games which use the fixed links of modem cables to allow two players to compete on separate machines, so it really should be encouraged.

Finally from NBS comes a licenceware release of fonts for all the 24 pin printers I can think of. The disk costs £3.50, but is well worth it. Amstrad, Epson and Star printers are among those catered



Fun, friendly and easy to use. Tbag is packed with nutritional goodness.

for, and there are 11 fonts per printer, plus a useful font designer which will let you print symbols (such as telephone or arrows) just through one keypress. It's also useful for foreign alphabets.

Licenceware is usually about £5, so this disk is cheap and as it comes with full, easy-to-follow documentation, 24-pin printer owners should ignore it at their peril.

## JUST YOUR CUP OF T

Amiganuts, as prolific as ever, has released **TBag** number 58. For those not familiar with **TBag**, it's another magazine on disk, but this time available to all those who subscribe to Amiganuts before it goes on general release.

On **TBag 58** are a selection of utilities such as a phone call monitoring program, and some workbench programs which should make life easier with your Amiga. Graphics of all sorts are represented as well, and everything is rounded off with a neat menu screen and easy-access system.

**TBag 58** will be available to Amiganuts subscribers on the 1 November and to everyone else on the 1 December.

If video pictures are your thing, then Amiganuts has a varied collection of those as well. Disks 1178 and 1179 have a lorry-load of NASA space satellite pictures for your to gawp at.



Plenty of different fonts for the 24-pin printer are available from NBS on one disk

## PD WANTED

If you run a PD library and you haven't had coverage from *New Computer Express*, rectify this immediately by sending in any PD you'd like reviewed to James Leach's PD Column, NCE, 30 Monmouth St, Bath, Avon BA1 2BW.

Just enclose the disks, details of what the programs do and which machine they're for, and who you are. You'd better get into the PD Column because your rivals are.

## PD LIBRARIES A-Z

You've read the column, so now you want to know where you can get hold of the software. That's where the Express PD Library listing comes in.

**8-BIT PUBLIC DOMAIN** - Spectrum, BBC, Amstrad CPC and ZX81 public domain software. Stamp and 10p for list. 1 Northolme Cl, Grays, Essex, RM16 2NX.

**17-BIT SOFTWARE** - PO Box 97, Wakefield, West Yorks WF1 1XX. Tel: 0924 366982.

**ADES PD LIBRARY** - All PD is less than £1. Some free. SAE for great details. Address 15 Deanes Close Dovercourt Essex CO12 4SH.

**ADPD** - For the cheapest Amiga PD around, some even free. Send SAE for details or disk for lists. 15 Deanes Close, Dovercourt, Essex CO12 4JH.

**ADVANTAGE** - 54 Bath Road, Cheltenham, GL53 7HJ. Tel: 0242 224340.

**AKORE SHAREWARE** - 7 Fishergate Point, Lower Parliament Street, Nottingham NG1 1GD. Tel: 0800 252221.

**ALDRO AMIGA PD SWAP CLUB** SAE and blank disk for details. Lists growing every day. Send to: Water Meadow, Quaggeley, Gloucester GL2 6XR.

**AMIGA ANSWERS** - Integrated programmers library and problem solving service £1.50 for cat and programmers utility disk. 11 Mill Hill Rd, Norwich.

**AMIGA NON-RIP OFF PD** - For good Demos send disks+ postage to Mark, 50 Victoria Ave, Seaford, Lincolnshire NG34 7LN.

**AMIGA PD BREAKTHROUGH** - You've tried the rest, now try the best! from 18p per disk. Swift dispatch of all orders. Contact Darryl, 12 Kent Avenue, Ross-on-Wye, HR9 5AQ, NOW!!

**AMIGANUTS UNITED** - 169 Dale Valley Rd, Hollybrook, Southhampton SO1 6QX.

**AMOS** - 0942 495261.

**ANDRKKOS PC LIBRARY** - PC Megapack: 14Mb compacted Shareware, £16. Cheque/PO or SAE for list: Andy Kyriacou, 17 Parkhurst, London N22 4JQ.

**ANGLO AMERICAN SHAREWARE** - £1 a disk. Over 2,000Mb of top Anglo-American titles. Send two first class stamps for menu driven catalogue disk to 37 Devon Place, Newport, Gwent. Tel 0633 259847.

**ARCH ANGEL PD** - Over 230 disks of Archimedes software. Send 75p for catalogue/demo disk to 9 Chancel Court, Pinhoe, Exeter, EX4 8QE.

**ARCH PD** - 200+ disks of Archimedes PD. Send £1 or SAE and disk to Arch, PO 109, Ferry Rd, Hullbridge, Essex, S55 6EL.

**ATARI ST DEMO SPECIALIST** - Range of POV, megademos, singles, music modules, slideshows, utilities. £1 for catalogue disk. Unit 1, Johnson's Shopping Centre, 29/31 Bond St, Blackpool FY4 1QB.

**BASOFT PD** - Original PD plus the best of the rest. SAE to BASOFT, 357 Church Rd, Basildon, Essex SS14 2EV.

£1 per disk. New disk catalogue in exchange for blank

## ENTERING THE DOMAIN

New libraries open up every week, and *Express* is the best way to tell the world that you have arrived on the scene. If you want to be included in the list fill in the form on below. New entries are highlighted in this box.

PD library entries will only be included in the listing for eight weeks. If you want to keep your library in the listed, just send us a note to say you're still operating.

● **Aerial Shareware** - IBM PC compatibles. Catalogue on a disc (free, state size). 7 Valehead, Monkseaton, Whitley Bay, Tyne & Wear NE25 9AY.

● **Alpha PD** - Amiga PD, monthly update of cat disc, £1 per disc. 22 Ceylon Place, Eastbourne, East Sussex BN21 3JF. Tel: 0323 26790.

● **Anglo-American shareware** - PC PD, £1 disc + p+p, 2000Mb/AVA. Choose programs to fill you disc. 2 first class stamps for catalogue disc: 37 Devon Place, Newport, Gwent. (0633 259847).

● **Amiga Gold PD** - Good quality PD at favourable prices. Write: 6 Churcher Cl, Gosport, Hants PO12 2SL.

● **Asgard PD** - New programme (Amos) 'The Cat Machine' - build your own Cugat library £1.50: 20 Langdale Drive,

Flanshaw, Wakefield WF2 9EW Tel: 0924 361101.

● **Crazy Joe's** - Amiga PD, catalogue disk 50p. Tel: 0709 829286.

● **Freeway Amiga PD** - 99p a disk. Phone or write for disk, swaps welcome: 11 Elizabeth Place, Sompting, W Sussex Tel: 0903 767030.

● **Future PD** - Amiga PD only, 60p a disk, send £1 for list & demo to: 138 Guildford St, Grimsby, South Humberside DN32 7PW.

● **ICPUG** - Free PD for Commodore, IBM/PC compatibles. Write: ICPUG, PO Box 1309, London N3 2UT.

● **JASE PD** - PD software, £1.25 a disk. Write: 9 Broadfield Sq, Enfield, Middlesex EN1 3PA or call 081 8057749 (6.30pm).

**BEGINNERS' PD** - ST PD starter disks. Two available. Over ten programs. £3 the lot. Write: James Thoroughgood, 114 Sandringham Way, Frimley, Surrey, GU16 5YF. Also send suitable SAE. No cheques.

**BBB (BIG BAD BRIAN'S) PD library**. 3.5-inch only from £1. Send formatted disk and SAE for catalogue to BBB, 35 Grangeside Ave, Hull HU6 8LP.

**BENETECH** - PC PD. 21 Loughborough Road, Leicester LE4 5JL.

**THE BEST PD** at best prices. Checked and virus free. £1.50 for demo disk, cat, and membership card. Chris Bayliss, 38 Grantham Dr, Bury, Lancashire BL8 1XW.

**BOOT UP PUBLIC DOMAIN** - Amiga Public Domain. Only £1 per disk. Send 75p for catalogue disk to Carol

Wellington, 30 Sunnings Lane, Upminster, Essex RM14 2DQ.

**BROADSWORD PUBLIC DOMAIN** - Atari ST PD. 70p per disk. Send disk plus SAE to Flat 4, Moreton Court, 212 Dover Road, Walmer, Deal, Kent CT14 7NB. Over 350 disks.

**BUDGIE UK** - 5 Minster Close, Rayleigh, Essex SS6 8SF.

**BURMAN'S PD** - Amiga PD for 40p. For a cat disk, demos and a game send stamp + disk: Burman's PD, 41 Pinner Park Gdns, Harrow, Middlesex, MA2 6LQ.

**BYTEBACK** - 6 Mumby Close, Newark, Notts NG24 1JE. Tel: 0636 79097.

**C'S PD LIBRARY** - Sam Coupe PD Software. Send SAE and disk (or 80p) for disk catalogue to: CMS PDL, Donald Drive, Chadwell Heath, Romford, Essex.

**CALEDONIA PDL** - 250 Oldtown Rd, Hilton, Inverness IV2 4PT. Tel: 0463 225736.

**CAPRICORN COMPUTERS** - 35 Warwick Rd, Olton, Solihull, West Midlands B92 7HS.

**CHEZRON SOFTWARE** - 605 Loughborough Rd, Birstall, Leicestershire LE4 4NJ.

**CHRISTIAN COMPUTER CONCEPTS** - Christian PD/shareware. 5.25-inch. Ian Hurst, 7 Perrybrook Walk, Ashton in Makerfield, Wigan WN4 8TR.

**CIRCULAR PD LIBRARY** - 14 Morrison Drive, Lennoxton, Glasgow G65 7BA.

**COLONIA PDL** - PD swap shop! Amiga and ST. Over 350 titles. One for one. Swap free. For list write to 4 Eastfield Street, Lincoln LN2 5ES.

**CRAZY DIAMOND PD** - For the ST. Send SAE and blank disk for catalogue and free PD to 58 Hillside Rd, Sudbury, Suffolk CO10 6SA.

**DATA PD** - For Amigas and Amstrad CPCs. For disk-based catalogue and sample programs send £1 (Amiga) or £2.50 (CPC). Cheques/POs to T Kingsmill, 202 Park Lane, Park, Albans, Herts AL2 2AQ.

**DELTA C64/128 PUBLIC DOMAIN** - SAE: Delta PD, Station Rd, Claydon, Ipswich, Suffolk IP6 0HS.

**DELUXE AMIGA** - Exclusive review Terminator 2 in issue 1. Send a £1 cheque/PO to Antony Grace, 11 Furzeley Crescent, Reigate, Surrey RH2 7HQ.

**DISCOVERY PD** - Coming soon. For Atari ST. Wide selection and excellent after sales help. Disks £1-1.50. Disk catalogue 50p. Write to J Thoroughgood, 114 Sandringham Way, Frimley, Surrey GU76.

**DIGITAL APPLICATIONS** - have changed their name to Essex Computer Systems, 118 Middle Crockerford, Basildon, Essex SS16 4JAGENERAL AMIGA - A comprehensive Amiga PD Library. Disks. Only £1.

Monthly catalogue/magazine £1.50. Cheque or P.O. General Amiga, 19 Eam Court, Alfoa, FK10 1PT4.

**THE DISK** - Stephen Lord, 6 Stubbington Brink, Hebdon Bridge, West Yorkshire HX7 6LR.

**DRAGON PD** - Programmers wanted for Amstrad, CPC 6128 PD library. For more info. write to: Dragon Road, 415 (flat) Whitehall Road, Bristol, BS5 73P.

**DYNAMIX** - PC, Amiga and C64 Public Domain. All new and best titles. For free details contact 132 Springwood, Llanedeyrn, Cardiff CF2 6UF. (SAE)

**EAST MIDLAND PUBLIC DOMAIN LIBRARY** - 54 Watnall Road, Hucknall, Nottingham NG15 7LE.

**ED's FREE PDL** - Public Domain for the Atari ST. Send your list for mine, 1-4-1 basis. EJ Carter, 184 Hatters Lane, High Wycombe, Bucks HP13 7LY.

**EDLIB** - Interactive, educational and productivity compilations PD for Amiga. £1.50. All regular PD only



# If winning is your goal...take aim with SCOREDRAW

The **COMPUTERISED** comparative analysis system for predicting football results  
Written by a professional team of computer experts

## Includes:

Fixtures for Barclays league,  
Scottish & Beazer Homes, and  
GM Vauxhall Conference.

## Features:

Previous season's games, over  
10000 games DataBase, including  
results, League tables etc.

## Flexible:

Add, Delete, Change fixtures - add  
your own games, Cup matches or  
even local leagues!  
Variable prediction parameters -  
Input your own preferences to give  
unique results. Allows you to keep  
track of all scores and analyse  
results obtained with different  
prediction patterns.

**£59.95** + VAT & Carriage

(Total price £72.44) For MS-DOS Systems (HardDisk)

**CALL NOW ON 0424 752288**

Send for our **FREE BROCHURE** of Hardware, Business & Leisure Software

**RDN**

DATA SYSTEMS LTD

**RDN Datasystems Ltd**

P.O. Box 44, Hastings, East Sussex, TN34 2SY

Payment by Cheque, Access or Visa (cheques payable to:  
RDN Datasystems Ltd.), or telephone: 0424 752288



1754

## NBS PUBLIC DOMAIN

Shareware & Licenceware for the Amiga

1 CHAIN LANE, NEWPORT, ISLE OF WIGHT, PO30 5QA

TEL: (0983) 529594 FAX: (0983) 821599

## GREATEST DEMOS

D 033 TOMSOFT: TRIP TO MARS  
D 074 VECTOR TUNNEL  
D 091 FILLIT THE FISH  
■ 153 PUGGS IN SPACE  
D 190 RSI CEBIT plus more  
D 225 HORIZON MEGADEMO  
D 259 PHENOMENA ENIGMA  
D 261 SIMPSONS DEMO  
D 295 TOMSOFT: VIRTUAL WORLD  
M 269 ALCATRAZ MUSIC  
M 316 LSD: DON'T PANIC

## AMAZING GAMES

G 107 STAR TREK (2 disks)  
G 133 GAMES COMPO 1  
G 142 GAMES COMPO 3  
G 170 MEGABALL Breakout  
G 175 CUBULUS Rubic puzzle  
G 179 LLAMATRON  
G 187 SUPA SKODA CHALLENGE  
G 195 POM POM GUNNER

Sorry, no descriptions for the above  
disks, but they are a selection of the  
very best in PD for the AMIGA. Full  
catalogue available. Please send  
SAE, or include £1.00 for Cat. Disk.

## UTILITIES

U 225 AMIBASE Database  
U 233 UEDIT Wordprocessor  
U 611 MED v3.11b  
U 616 AMIGA FOX Basic DTP  
U 619 MESSYSID Amiga to PC  
U 629/30 COMMS Compilation  
U 641 to U 655 CLIP ART

Massive 15 disk collection  
U 645 24 PIN PRINTER FONTS

U 610 VIRUS TRACKER £1.50  
Beginners guide to virus and  
how to detect them safely!!  
inc. NUKE the new virus killer

Also available: FISH, AMOS, T-BAG  
Glamour selection. Commercial  
Software, Blank disks, accessories,  
Cables, ribbons etc.  
MODULATOR EXTENSION KIT £10.99  
Moves that awkward modulator!  
NBS Public Domain £1.25 per disk  
Two free with every 10 ordered!

Please make cheque/PO payable  
to NBS, or phone in with your order.  
Access and Visa welcome.

**NBS - Not the cheapest, but still the best!!**

89p. Graphics Master 1 + 2, graphic image manipulation  
PD software. ■ Contact Edlib, Scotland Farm,  
Stockwood Rd, Brislington, Bristol BS4 5LU.

ELMSOFT - PO Box 17, Loughton, Essex IG10 2EE.

ESSEX SHAREWARE LIBRARY - Beginners pack of  
the best of PC Shareware. Ten disks £14.99.  
Cheques/PO to Essex Shareware, 221 Branksome  
Avenue, Stanford-Le-Hope, Essex.

FORTISS ■ - Amiga PD. Watch the magazines for our  
advert or send £1 for catalogue disk to Fortiss PD, PO  
Box 2, Earl, Shilton, Leicester LE9 8LU.

FREAKS PUBLIC DOMAIN LIBRARY - Disks filled  
from a huge range. Ribbons re-linked, recycled  
packaging, send stamp for catalogue to Freaks, 29 Leap  
Valley Crescent, Downend, Bristol BS16 6TQ.

FREEWAY PD - For ■ Amiga. Loads of titles for only  
99p including p&p. Send disk for list. Freeway PD, 11  
Elizabeth Place, Somring, Sussex BN15 9UJ.

GARNER DESIGNS - Spectrum PD. 57 Lovers Walk,  
Dunstable, Bedfordshire LU5 4BG.

GOODMAN PDL - 16 Conrad Close, Meir Hay Estate,  
Longton, Stoke-on-Trent, Staffs ST3 1SW. Tel: 0782  
335650

IMG CLIP ART - GDOS fonts for sale or swap. For  
catalogue send blank disk plus SAE or £1 ■ E Renner,  
■ Broxholme Lane, Doncaster.

IMAGE ART ST PD LIBRARY - Hundreds IMG Picts.  
Calamus Fonts and more. SAE £1.50 for catalogue.  
Image Art, 19 Brenda Rd, Tooling Bec SW17 7DD.

JACKSON'S PD SPECTACULAR - Amiga PD. 22  
Victoria Court, Clifton Rd, Worthing, Sussex.

JENNIX PD - Celebrating our second birthday in style.  
For the best ST PD around, the most competitive prices  
and the best service talk to us. Send 50p for catalogue  
disk to Jennix PD, 66 Abbey Road, Strood, Kent. Tel:  
0634 723659.

JPDL - Atari ST PD. Double-sided disks supplied if  
possible. Blank disk and SAE or 70p to: J Kiltner, 120  
Wiggington Road, Tamworth, Staffs B79 8RW.

KEANSOFT PD - ST PD for sale. Send SAE and blank  
disk for copy ■ latest catalogue. Write to Keansoft ■,  
42 Lords Croft, Clayton-Le-Woods, Nr Chorley, Lancs  
PR6 7TP.

KEV'S PD - Amiga £1 disk. K Larkin, 12 Hathaway  
Court, Cheriton Rd, Gillingham, Kent ME8 0ES.

L & D PD - Amiga ■ from 35p per disk. Monthly  
competition to win PD of your choice. Also a new  
digitising service is available. For info send SAE and  
disk to L & D PD, 10 Hombean Green, Pontefract, West  
Yorks WF8 2DX.

LAPD - Worldwide reputation for quality PD for the ST.  
Thousands ■ programs available. Disk catalogue only  
£1.00. Credit cards accepted. Telephone 0773 605010  
or 0773 761944.

LARD PD - Only 95p per disk. Amiga only. For  
catalogue write to Lard PD, 41 Craven Road,  
Hemsworth, West Yorks WF9 4SB. Enclose SAE.

LEMMING SOFT - Amiga demos to swap. over 300  
disks. List keeps growing by day also want two meg  
demos write to: John Simmons, Flat 45, 2 Silvermere

Road, Sheldon, Birmingham, B26 3XA.

MASTER PD - Amiga PD to swap and sell. Send SAE  
and list to A Hines, 44 School Lane, Easton Bray,  
Bedfordshire, LU6 2DT 100 per cent reply.

MERSEY SHAREWARE - PC Shareware. £1.50 per  
disk. (3 5/5.25). SAE for list. Any title obtained. Phone  
with details of requirements. 17 Ullet Road, Liverpool  
L17 3BL. Tel: 051-733 1178.

MERTON PD - Cheap ST PD. Send £1 or blank disk for  
catalogue with SAE (cheques payable to T Huq) to: 10  
Grasmere Avenue, London SW19 3DX.

MONSTER CABLE - Free ST PD, honest! Just the  
price of a stamp. Puts all others ST PD libraries to  
shame. Send SAE for more info to M Sandhu, 25  
Welbeck Road, Maidenhead, Berkshire SL6 4EB.

NEURAL IMAGES PD - Send an SAE to, Flint Walk,  
Throston Grange, Hartlepool, Cleveland. TS26 0TE for  
your free PD Disk. No catches!

NBS Public Domain - have changed their address to: 1  
Chain Lane, Newport, Isle of Wight PO30 5QA

NIGHTSHIFT - 8 Bertelin Road, Beaconside, Stafford  
ST16 3JJ.

OWN PC CLUB 7 SHAREWARE - 73A East Street,  
Blandford Forum, Dorset DT11 7DX. Send blank disk  
plus stamp for catalogue. 25p each prog.

PAD PD AND SHAREWARE LIBRARY - For Amiga  
users. SAE for details: PAD Public Domain Library, 41a  
Saint Augustine Street, Norwich, Norfolk, NR3 3HF.

PARADISE COMPUTERS (GLOBAL) - 9 Westfield  
Crescent, Brighton, East Sussex BN1 8JB.

PAWS PD - Lichfields only PD library. Disks £1. Swaps  
welcome. Send a SAE for list to: Anthony Cooper, 14  
Purcell Ave, Lichfield, Staffs WS13 7PJ.

PC SHAREWARE/PD - ■ Disk + P&P. 2000 MB/AVA.  
Top titles. Chose programs to fill disk. 2 1/2 class stamps  
for menu cat disk, 37 Devon Pl., Newport, Gwent.

PD for the ST - best catalogue, best service. No  
connection with 'South West PD'. The South West  
Software Library, PO Box 562, Wimborne, Dorset, BH21  
2YD.

PROPHECY PDL - ST PD. Send SAE and disk or a  
cheque for £4.50 to Prophecy PD, 390 Coulsdon Rd,  
Old Coulsdon, Surrey, CR5 1EF. Competitive prices.

REAL PD - Amiga PD libraries - wanna join real PD?  
For more info write to Mark, 50 Victoria Avenue,  
Sleaford, Lincolnshire NG34 7GN.

PD SOFTWARE for the ST. Only the best programs.  
Get into our library. Send 50p. or blank disk + SAE 95.  
Elton Road, Sandbach, Cheshire CW11 9NF.

RICHARD KIRK PD - Atari ST PD £1 or 45p per disk.  
Send disk plus SAE for catalogue to R Kirk PD, Copes  
Farm, Withington, Leigh, S-O-T, Staffs ST10 4PN.

RIVERDENE PDL - 30a School Road, Tilehurst,  
Reading, Berks RG3 5AN.

ROBOT PD - 2 Trent Rd, Oakham, Rutland LE15 6HF.  
SAINT JOHN'S SCHOOL LIBRARY PDL - ST PD  
software sale or swap: St John's School Library PDL, c/o  
Mark Ash, 54 Beaconsfield Road, Sittingbourne, Kent  
ME10 3BB Tel: 0795 425653 after 4pm.

SCOTBASE PDL ASSOCIATION - Affordable  
Shareware for PC users. Blank disk and SAE for  
catalogue and details to: Rosie, 63 Springboag Road,  
Glasgow G32 0DB.

SELECT PD - For the ST. From 35p a disk. Send £1  
coin for disk catalogue to RC Newman, 22 Hall Road,  
Leckinghampton, Cheltenham, Glos GL53 0HW.

SHAREWARE ELITE - Over 1,300 shareware disks for  
PCs. Send blank disk and SAE for catalogue to 25  
Cades Parc, Holston, Cornwall. Tel: 0326 564164.

SHAREWARE KING - 3,000 items of shareware for PC,  
plus support, membership, plus discounts. SAE and  
blank disk for details to C Smith, 10 Penwood Close,  
Westbury, Wilts, BA13 3LW. Tel 0373 865263.

SHAREWARE/PD - Windows, clip-art and GIF  
shareware for the PC. Send disk and SAE for list to T  
Wishart, 3 Benwick Rd, Port Glasgow PA14 5QN.

SHIELDSOFT PD - Now from only 50p per disk.  
Catalogue disk 75p. For details SAE to ■ Daniels, 63  
Churton Rd, Rhyl, Chwyd LL18 3NB.

SINGER PD - 62 Manor Rd, Hastings E Sussex TN34 3LJ.

SOLENT SOFTWARE - Atari ST. 53 Rufus Gardens,  
Totton, Hants SO4 3TA.

THE SOURCE PD - For the ST. Compacted demos  
disks. £1.50 each. Write to: 7 Shearwater Lane, Norton,  
Stockton, Cleveland TS20 1SH.

SOUTH WEST PD - PO Box 562, Wimborne, Dorset  
BH21 2YD.

THE ST ADVENTURER'S PD LIBRARY - Catalogue  
disk just 50p. Write to John R Barnsley, 32 Merrivale Rd,  
Stafford, ST17 9EB.

ST ICE PDL - Send disk or £1 for great catalogue with  
programs included. Quality disks, viruses checked. All  
disks £1.80 incl. p&p. Write ■ 7 St James' Close,  
Kettering, Northants NN14 5HB.

STAR PD - Atari ST PD library fast 'n' friendly! Disk and  
SAE for free PD and our disk-based catalogue: Star PD,  
1 Solva Rd, Clase, Swansea SA6 7NX.

STATE BOB PDL - Atari ST demos, art packages and

soundtrackers. Cheaply priced. Send blank disk to: State  
808, 3A Old Lanark Road, Charlke, ML8 4HW.

START COMPUTER SYSTEMS - Dept A, Barbican House,  
Bonnersfield, Sunderland SR6 0AA. Tel: 091-564 1400.

STUPID FLOWER PD - new library for ST users. SAE  
for free catalogue to SFPD, 3 Read Mead, Glastonbury,  
Somerset BA6 8DN or call 0458 35027. Ask for Matt.

TANK PD - disks only 80p (members), 75p (non-  
members). Prices include p&p. Hundreds of titles. Send  
blank disk and SAE to: 4 Chandos Road, Redland,  
Bristol BS8 6PE.

TOWER PD (ST) - For POV and other Atari ST PD  
software. £1.50 per disk. Send £1 for disk catalogue ■  
PO Box 40, Thornton-Cleveleys, Blackpool FY5 3PH.

TOWER TOP PDL - The Coragen Corporation, 4  
Cardigan Close, Blethley, Milton Keynes MK3 7EJ.

TRUST PD - 18 The Park, Southwam, Halifax, HX3  
9QY. Tel: 0895 53521.

VENUS SHAREWARE - IBM Shareware: Amateur  
radio, technical, engineering, education, Windows  
utilities and more. Tel 0252 837860 for free catalogue.

WARLOCK PD CLUB - New Amiga club and library all  
tested and virus free. No fee. Tel Mark on 0582 761723.  
2 Manland Avenue, Harpenden, Herts AL5.

WINDMILL SOFTWARE - Our catalogue describes  
programs not disks. SAE and 50p or disk for ST  
catalogue to ■ Raeburn, Windmill Software, 360  
Windmill Road, Ealing, London W5 4UR.

WIZBIT PD LIBRARY - New Mac PD library. Disks £3.  
Around 100 disks available. Intro pack £1 from Wizbit  
PD, 38 Greenbank Gardens, Edinburgh EH10 5SN.

WORSOFT - Michael Andersson, Tjardalsgrand 11,  
18341 TABX, Sweden.

ZEON'S LAIR - PD software for the C64. Send 35p  
stamp: 12 Castlegate, Penrith, Cumbria for free  
catalogue on disk. Free software.

ZOMBIE PD - Latest ST disk cat available. No charges!  
Send blank disk + SAE and your list ■ 41 Buckingham  
Avenue, Penwortham, Preston, Lancs.

## PD Library name.....

## Details of service offered .....

## Address.....

## Phone no.....

Send to: PD Listing, NCE, Future Publishing, 30 Monmouth St, Bath BA1 2BW





# Games Week

Outgoing, outspoken, but never outclassed, Stuart Campbell's reviews, tips and news tell you what's best for you and your machine

## STAR RATINGS

- = Teenage Fanclub
- = Teenage Kicks
- = Teenage Riot
- = Teenage Rampage
- = Barbara Cartland

**C**64 supremos System 3 has a couple of major releases lined up in the extremely near future, and both are looking impressive in different ways. *Last Ninja 3* is the final (?) game in the series which has garnered more accolades for the company than pretty much any other C64 game ever, and this cartridge version looks like comfortably

the best of the lot.

System 3 has tweaked the gameplay in an attempt to appeal to a slightly more 'mature' market than the previous titles, with strong role-playing elements added to the usual beat-'em-up and exploration aspects (it says here), and enormous success seems inevitable.

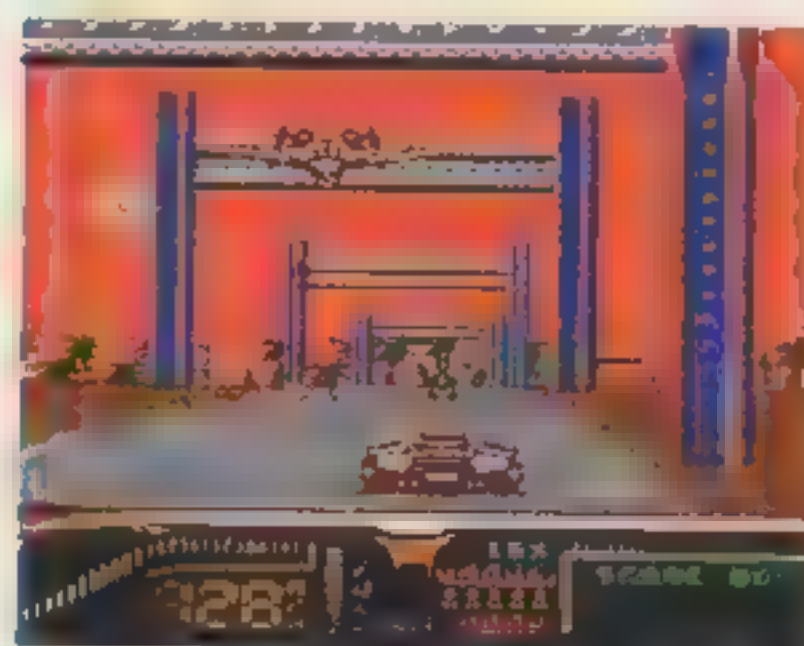
At more or less the opposite end of the gaming spectrum is *Turbocharge*, a stunningly fast driving-and-blasting game which has already pulled in some

## METAL MASTERS

• Infogrames • Amiga

If you're having a desperately hard time (of the wrong sort) playing this unexciting robot beat-'em-up, simply hit the F4 key during the game to disable your opponent's movement functions, allowing you to wander across and smash him to pieces at your leisure.

TOP 10		ALL FORMATS BUDGET	
1	New Zealand Story	Hit Squad	SP CO AM ST AG
2	Bubble Bobble	Hit Squad	SP CO AM ST AG OT
3	Batman: The Movie	Hit Squad	SP CO AM ST AG OT
4	Shinobi	Mastertronic	SP CO AM ST AG OT
5	Indiana Jones: Last Crusade	Kixx	SP CO AM ST AG OT
6	Cabal	Hit Squad	SP CO AM ST AG
7	Dragon Ninja	Hit Squad	SP CO AM ST AG
8	Dizzy Panic	CodeMasters	SP CO AM
9	Double Dragon	Mastertronic	SP CO AM ST AG OT
10	Monnwalker	Kixx	SP CO AM ST AG OT



• Turbocharge - the best 8-bit driving game ever?

ecstatic reviews, including a huge 93 per cent from our sister mag *Commodore Format*. The review ended with the words 'Any Commy owner who lets this one pass him by is on the one hand stupid, and on the other hand incredibly stupid', which would seem to suggest that C64 owners are in for a major treat when this hits the streets in about three days' time.

## SIMPSON SUCCESS

After some success with the Amiga version of the *Simpsons* licence (soon to be available on general release after a period of exclusive bundling with new Amiga packs), Ocean is proceeding apace with other machine versions.

The Spectrum port is the most advanced, and it looks like a surprisingly faithful translation of the 16-bit game. All the levels and enemies are still there, and loads of colour has been packed in in an attempt to maintain the cartoon appeal that's so important in games of this nature.

## COCK-UP CORNER

Game Boy fans disappointed by last week's one-star review of *Dragon's Lair* may be slightly less disappointed by the fact that it should in fact have been a three-star review. The person responsible for this teeny mistakette has been shot.

## ROLLING RONNY

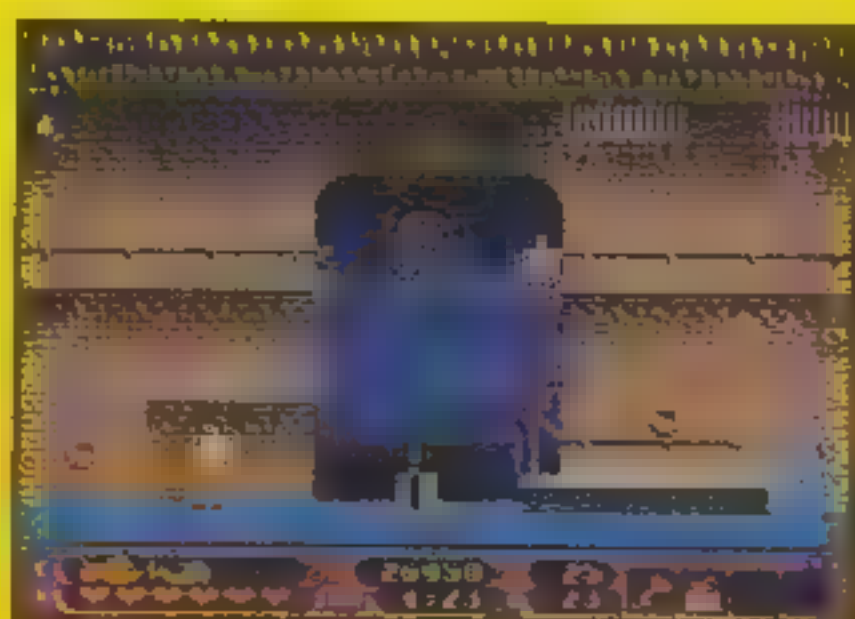
I've been looking forward to this for quite a while now, having been impressed with the Amiga and ST demo versions which went on our sister magazines *Amiga Format* and *ST Format*. Now Virgin (Sega Europe, surely?) has come up with the finished versions, and I must admit to being just a tiny bit disappointed.

Only a tiny bit, mind you, but this just isn't quite the classic Mario-inspired platform romp I'd been hoping for. It's a beautiful-looking game, pin-sharp graphics with loads of character added in great playability and addictive qualities, but there's something lacking in the way of action. The collision detection's a tad iffy for one thing, and the sonic balance between music and sound effects on the Amiga leaves a lot to be desired, as does the ST scrolling (what's new?) And the fact that on a TV screen it's often hard to spot the tiny jewel cases which Ronny has to collect to complete a level, but I think the bottom line has to be that there just isn't enough happening.

Too much of the time, our Ron (who, it has to be said, is one of the central characters of the year in my book) finds himself skating along unopposed with only the far-from-tight time limit to worry about. If the stages had been halved in length with the same number of baddies, then Virgin could have had a real winner on their hands.

Don't get me wrong, after the first level there's no shortage of difficulty, but it's of a faintly unimaginative design, consisting

• Down in the sewer, and the game suddenly gets much, much harder. At least, the Amiga version does - it's well mean



• With such pretty scenery to wander around, it seems almost a shame that Ronny has to bother with something as mundane as crime-solving

largely of to-ing and fro-ing backwards and forwards solving platform-negotiating problems and relying on the special pick-up items rather than keeping it simple and testing the player's joystick-manipulating skills. Often the wrong choice or use of a single item will leave Ronny unable to complete a level, which is just a bit too lazy for my taste. I've gone on about memory-testing as a substitute for proper game challenge in great length in the past, but when it crops up in an otherwise excellent game like this it's even more depressing than usual.

Don't mistake this farrago of nit-picking for a real pasting, because *Rolling Ronny* is a lot of fun and I enjoyed playing it hugely, but with only a small amount of extra care it could have been one of the games of the year. Mario lovers, don't sell your Famicom just yet.

## TOP 10 ALL FORMATS FULL PRICE

### NE J White's W'wind Snooker

1	Man Utd Europe	Virgin	ST AG
4	Thunderhawk	Krisalis	SP CO AM ST AG
3	Rainbow Collection	Core Design	ST AG
6	Rodland	Ocean	SP CO AM ST AG
5	Dizzy Collection	Storm	SP CO AM ST AG
NE	Silent Service 2	CodeMasters	SP CO AM
17	Monkey Island	Microprose	AG OT
2	Cruise for a Corpse	US Gold	ST AG OT
10	Hero Quest	US Gold	AG
		Gremlin Graphics	SP CO AM ST AG

■ = Atari ST AG = Commodore Amiga PC = IBM PC or compatible SP = Spectrum  
CO = Commodore 64 AM = Amstrad OT = Other  
Chart compiled by Gallup. © European Leisure Software Publishers Assoc.



## THUNDERJAWS

Domark/Tengen • 16-bits £25.99 • 8-bits £12.99



• 'See, I told you it was worth getting to the end.'



• God only knows what this is meant to signify...



• A posse of sharks ignore our hero completely as they spot something interesting behind him



• Not much I can say about this pic. Yes, it is as dull as it looks.

The actual graphics, which admittedly weren't Amiga state-of-the-art, are practically identical, and for once it looks like the Speccy version of a big game isn't going to be a pale, rushed imitation of the big machines' effort. Owners of the much-maligned 8-bit can be impressed for themselves any day now. ■



• Wow, man! Yes, er, nice title screen, isn't it?

## CARRIER COMMAND (Mirror Image/Realtime)

This all-time classic for the Spectrum, Amiga and ST has recently been re-released on 16-bit budget label Mirror Image, so now might be a good time to help struggling commanders out with a few top tips.

## 1) GENERAL STRATEGY

Make the first two islands captured factory islands, the next two resource islands, and the next four defence islands. The high number of defence islands is to protect your home island - if this falls it's game over. Keep advancing towards the enemy base island - once this is captured the enemy supply line is destroyed, effectively immobilising the enemy carrier.

## 2.) FUEL AND SUPPLY PRIORITIES

These should be set as soon as possible as supplies run low very quickly. Carrier fuel should be high priority, with Manta and Walrus fuel on medium. High priorities for supplies should be Mantas, Walruses, ACCBs, long range com pods, all missiles, and viewing drones. Keep moving the supply islands up or you'll end up stranded without fuel. Try to have a number of routes

from your home island to your stockpile island so it's harder for your opponent to cut your supply lines.

## 3) ATTACKING OCCUPIED ISLANDS

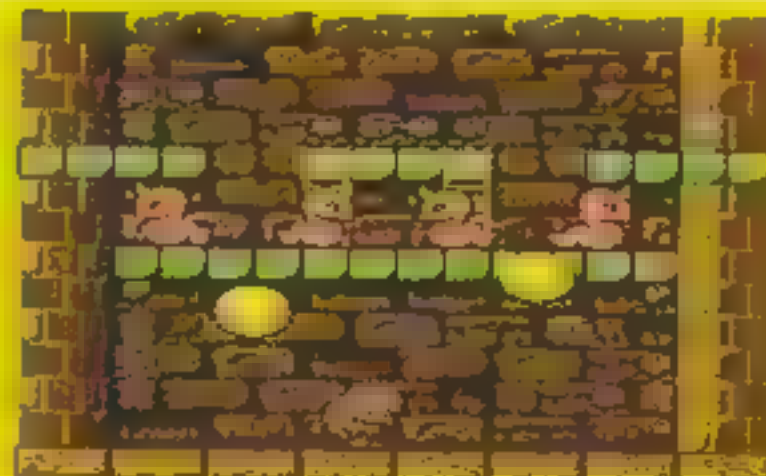
● Method 1 - Cruise missiles Deploy all drones to the rear of the ship and then reverse towards the island. Stop the carrier before you run aground and launch a viewing drone. When the command centre comes into view, let it have it with a couple of missiles. When the command centre is destroyed, simply occupy the island with a Walrus armed with an ACCB.

● Method 2 - Mantas Arm a Manta with 7 missiles (these CAN be used against ground targets), launch it and fly at the command centre at full speed, ignoring the attacks which will be coming from all sides. Launch missiles at the command centre until it is destroyed, then occupy with a Walrus as usual.

## 4) THE CHEAT MODE

Pause the game, type 'THE BEST IS YET TO BE' and press '+' on the keypad. This renders all your craft invincible, meaning you can land Mantas on enemy runways to refuel! It also gives your Mantas the ability to hover without using fuel.

## BEG, BORROW AND BURN



## BEG

## RODLAND • STORM

If you're just a little bit fed up of Mega Drive owners getting all the good arcade games, here's something to cheer you up no end. Programming stars The Sales Curve don't churn out games in a hurry, but when you see how much care and attention they devote to their products, it's easy to forgive them.

Rodland is a better-than-perfect conversion of Jaleco's cute and straightforward coin-op, with gorgeous

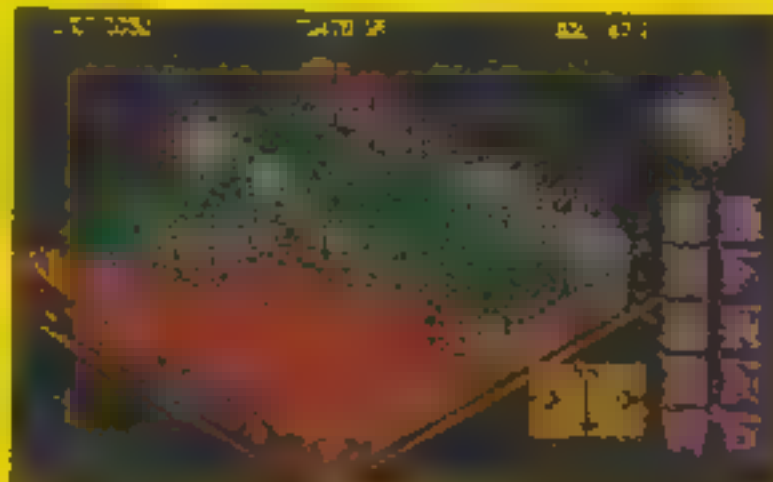
graphics and sound and the kind of gameplay that they just don't make any more. Rodland bursts at the seams with beauty and entertainment, and if anyone else comes anywhere near me saying 'But it's just a shallow boring arcade game for little kiddies and it doesn't make use of the machine's capabilities' they'll be taking their sad little kidneys home in a box. Utterly wonderful.

## BORROW

## UTOPIA • GREMLIN

Crossing Sim City with Mega Lo Mania sounds like a brilliant idea, and indeed it is, but this god sim from Gremlin narrowly fails to pull off either element with sufficient style to make the idea work. The fighting side runs out too quickly and the

city-building side lacks the depth of gameplay that this sort of thing really needs. It's a long way short of being a bad game, I enjoyed it a lot, but the chances are it'll leave you feeling just a little short-changed at the end of the day. By all means check it out for yourself though, if you found the other god sims a bit too complex it might be exactly what you've always been looking for.



## BURN

## MAGIC POCKETS • RENEGADE

Did you love Gods? Did you love Rainbow Islands? You'll hate this, then. The 'infallible' Bitmap Brothers (is there anyone else out there who thinks that the Speedball games are the only decent things this over-rated crew have ever done?) have produced a real turkey this time, and don't let any other blinded-by-hype idiots tell you otherwise. Slow, uneventful gameplay and some of the shabbiest design for quite some time are hidden beneath an exterior of 'cute' graphics and undeniably nice touches, but it doesn't take much scratching at the surface for the true horror to become clear.

Dull, dull, dull, dull, dull.



# PUBLIC DOMAIN

## GREAT SOFTWARE CAN BE YOURS FOR AS LITTLE AS ABSOLUTELY, TOTALLY, DEFINITELY, VERY NEARLY, JUST ABOUT NOTHING AT ALL. (HONEST)

Owning an Amiga, PC or ST now means that you can buy incredibly good software for little more than the price of a disk. Stunning games, utilities, demos, graphics, word processors and more can be found in Public Domain and Shareware software.

But (but! but!!) where do you start? How do you know which programs are completely wonderful and which ones should be re-formatted instantly? What's the best way to buy PD? And – whilst we're at it – just what is PD anyway?

For these answers and a whole trainload more, you'll need a new magazine called **PUBLIC DOMAIN**.

- Every issue is **packed full of reviews** – PD programs assessed for the Amiga, PC and ST.
- Every review is **screenshotted**. You can see exactly what you'll be buying.
- Every copy of PUBLIC DOMAIN comes with an incredible **program-packed coverdisk** – so you can get the very best PD for your machine every time.
- Every page is in **glorious full colour**, so you'll have unrivalled quality.
- And every edition of PUBLIC DOMAIN is backed by the full editorial resources of **Europe's most successful** news-stand computer magazine company, Future Publishing.

**PUBLIC DOMAIN** comes to you from the company that brings you Amiga Format, PC Format, ST Format, Amiga Shopper, PC Plus, Commodore Format, Your Sinclair, New Computer Express, Amiga Power, Amstrad Action, PC Answers, Sega Power and 8000 Plus; markets leaders all.

**First issue on sale October 3rd at £2.95**

**IF YOU WANT OUR ADVICE, BUY IT!**

**INCREDIBLE PACKAGE!  
MASSIVE MAGAZINE  
PLUS PROGRAM  
PACKED COVER DISK!**





# GoldStar

QUALITY, PROFESSIONAL PC's  
AT AFFORDABLE PRICES

EVERY PC COMES WITH:  
**1 YEAR ON-SITE WARRANTY**  
**VGA GRAPHICS AS STANDARD**  
**FREE UK DELIVERY**

GoldStar is a key division of the Lucky GoldStar Group, one of the world's largest international corporations, employing over 100,000 people with a turnover approaching £14 billion. GoldStar, with their unrivalled resources and technical ability, have manufactured and labelled computers for many of the world's leading computer companies for over 30 years! In fact, other PCs you may have been considering, because they have a different brand "name" on the outside, may well be a GoldStar on the inside!

Silica Systems, an official GoldStar appointed dealer, are pleased to recommend this comprehensive range which combines the very latest technology with years of manufacturing experience. GoldStar's quality and reliability coupled with the Silica Systems service, provide you with the perfect PC solution for the home, business or education. From an entry level 286 desktop workstation to a powerful 486 EISA tower system, Silica and GoldStar have the answer, at an affordable price!

## 286 12MHz £399

12.5MHz 286 (Landmark 17MHz)  
1Mb RAM (4Mb max on Motherboard)  
2Mb RAM on Plus Series  
EMS (LIM 4.0)  
42Mb, 130Mb or 210Mb IDE Hard Disk  
3 1/2" or 5 1/4" Floppy Disk Drive  
3 Expansion Slots  
VGA (Paradise III) Graphics - 256K RAM  
Serial, Parallel & PS/2 Mouse Ports  
12 Months On-site Maintenance  
DOS 4.01, DOS Shell, GW BASIC,  
EMS 4.0, & Utility Software  
**PLUS SERIES** (from £599) Includes:  
- Dual Floppy Disk Drives  
- Mouse, Mouse Mat & Windows 3  
Price - £399+VAT without Hard Drive

**£499** GT212  
WITH 42Mb  
HARD DRIVE

Model Shown is GT212 286 12MHz  
PLUS SERIES with GS1425 VGA Colour Monitor

### PLUS SERIES WITH DUAL FLOPPY, WINDOWS 3 & MOUSE

Model	PROCESSOR	RAM INC	MAX RAM ON BOARD	1 YEAR ON SITE	EXPAN-SION SLOTS	LANDMARK MHz	CO-PROCESSOR SOCKET	VGA	NO HARD DISK + Single Floppy 3 1/2" or 5 1/4"	42Mb HD + Single Floppy 3 1/2" or 5 1/4"	42Mb HD + Dual Floppies 3 1/2" & 5 1/4"	130Mb HD + Dual Floppies 3 1/2" & 5 1/4"	210Mb HD + Dual Floppies 3 1/2" & 5 1/4"
GT 212	286 12MHz DESKTOP CASE	1 1/2 Mb	4 Mb	•	3	17 MHz	287-10	PARADISE III	£399 +VAT=£458.83	£499 +VAT=£586.33	£599* +VAT=£703.83	£799* +VAT=£938.83	£1099* +VAT=£1297.33
GT 316	386 16MHz DESKTOP CASE	2 Mb	8 Mb	•	5	21 MHz	387-16	PARADISE III	£599 +VAT=£703.83	£699 +VAT=£821.33	£799 +VAT=£938.83	£999 +VAT=£1173.83	£1299 +VAT=£1526.33
GS 318	386 20MHz DESKTOP CASE	2 Mb	8 Mb	•	5	25 MHz	387-20	PARADISE III	£699 +VAT=£821.33	£799 +VAT=£938.83	£899 +VAT=£1056.33	£1099 +VAT=£1297.33	£1399 +VAT=£1643.83
GS 320	386 20MHz DESKTOP CASE - FULL SIZE	2 Mb	10 Mb	•	8	25 MHz	387-20	OAK	—	—	£899 +VAT=£1056.33	£1099 +VAT=£1297.33	£1399 +VAT=£1643.83
GS 347	386 25MHz DESKTOP CASE - 32K CACHE	4 Mb	8 Mb	•	5	40 MHz	386-25	PARADISE III	—	—	£1399 +VAT=£1643.83	£1599 +VAT=£1878.83	£1899 +VAT=£2231.33
GS 335	386 33MHz TOWER SYSTEM - 64K CACHE	8 Mb	16 Mb	•	8	50 MHz	386-33	ATI Wonder+	—	—	—	£2099 +VAT=£2466.33	£2399 +VAT=£2818.83
GS 425	486 25MHz EISA TOWER SYSTEM - 8K CACHE	8 Mb	16 Mb	•	8	114 MHz	N/A	ATI Wonder+	—	—	—	£3499 +VAT=£4111.33	£3799 +VAT=£4463.83

### 14" VGA MONITORS

MODEL N°	MONO/COLOUR	DOT PITCH	VGA 31.5KHz	S-VGA 35.2KHz	E-VGA 35.5KHz	1 Yr On-Site	Tilt & Swivel	EXC VAT	INC VAT
GS 1405	MONO	N/A	640x480	800x600	—	•	•	£100	£117.50
GS 1425	COLOUR	.39mm	640x480	—	—	•	•	£200	£235.00
GS 1430	COLOUR	.31mm	640x480	—	—	•	•	£230	£270.25
GS 1450	COLOUR	.28mm	640x480	800x600	1024x768	•	•	£250	£293.75

### OPTIONS

DESCRIPTION	EXC VAT	INC VAT
1Mb x 9-bt SIMM Memory Board	£50	£58.75
287 - 12MHz Maths Co-Processor - For GT 212	£100	£117.50
387-16MHz Maths Co-Processor - For GT 316	£85	£99.88
387-20MHz Maths Co-Processor - For GT 318	£100	£117.50

### OPTIONS

DESCRIPTION	EXC VAT	INC VAT
387-20MHz Maths Co-Processor - For GS 320	£150	£176.25
387-25MHz Maths Co-Processor - For GS 347	£150	£176.25
387-33MHz Maths Co-Processor - For GS 335	£160	£186.00
337Mb SCSI Hard Disk Drive - 10.7ms Access	£999	£1173.83

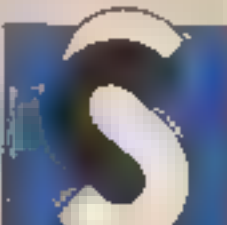
## SILICA SYSTEMS OFFER YOU

- **FREE OVERNIGHT DELIVERY:** On all hardware orders shipped in the UK mainland.
- **TECHNICAL SUPPORT HELPLINE:** Team of technical experts in your service.
- **PRICE MATCH:** We normally match competitors on a "Same product - Same price" basis.
- **ESTABLISHED 12 YEARS:** Proven track record in professional computer sales.
- **BUSINESS + EDUCATION + GOVERNMENT:** Volume discounts available for large orders.
- **SHOWROOMS:** Demonstration and training facilities at our London & Sidcup branches.
- **THE FULL STOCK RANGE:** All of your requirements from one supplier.
- **FREE CATALOGUES:** Will be mailed to you with offers and software/peripheral details.
- **PAYMENT:** By cash, cheque, all major credit cards, or extended payment plan.

Before you decide when to buy your new GoldStar PC, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals or software, or help and advice. And, will the company you buy from contact you with details of new products? At Silica Systems, we ensure that you will have nothing to worry about. We have been established for over 12 years and, with our unrivalled experience and expertise, we can now claim to meet our customers' requirements with an understanding which is second to none. But don't just take our word for it. Complete and return the coupon now for our latest Free literature and begin to experience the "Silica Systems Service".

MAIL ORDER HOTLINE  
**081-309 1111**

**SILICA  
SYSTEMS**



**MAIL ORDER:** 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-309 1111  
Order Lines Open: Mon-Sat 9.00am-6.00pm No Late Night Opening Fax No: 081-308 0808  
**LONDON SHOP:** Tottenham Court Road, London, W1P 0BA Tel: 071-580 4000  
Opening Hours: Mon-Sat 9.30am-6.00pm No Late Night Opening Fax No: 071-323 4737  
**LONDON SHOP:** Selfridges (1st Floor), Oxford Street, London, W1A 1AB Tel: 071-629 1234  
Opening Hours: Mon-Sat 9.30am-6.00pm Late Night: Thursday until 8pm Extension: 3914  
**SIDCUP SHOP:** 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX Tel: 081-302 8811  
Opening Hours: Mon-Sat 9.00am-5.30pm Late Night: Friday until 7pm Fax No: 081-309 0017

To: Silica Systems, Dept NCE-1091-66, 1-4 The Mews, Hatherley Rd, Sidcup, Kent, DA14 4DX

**PLEASE SEND ME A GOLDSTAR CATALOGUE**

Mr/Mrs/Ms: ..... Initials: ..... Surname: .....

Address: .....

.....

Postcode: .....

Tel (Home): ..... Tel (Work): .....

Company Name (if applicable): .....

Which computer(s), if any, do you own? .....



PREVIEW

Roll up, roll up! Guys and gals - oh alright, just guys then\* - next week in *New Computer Express* we present:

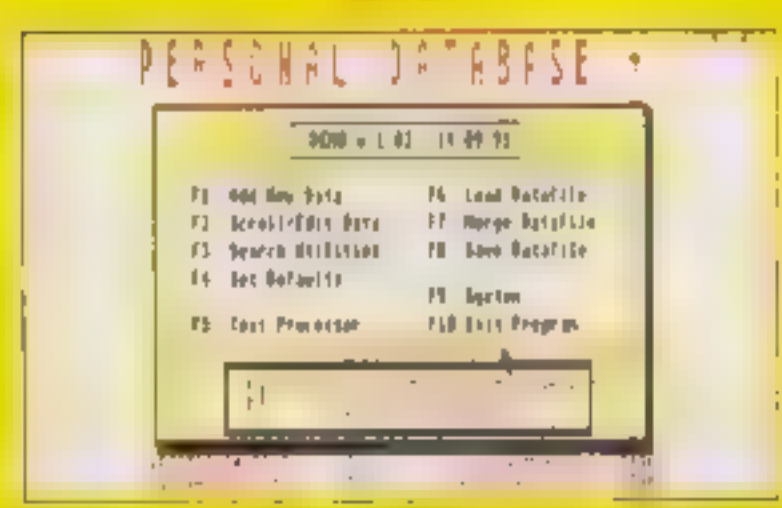
# VAST VOLUMES OF VIBRANT VARIETY!

## AMIGA



• With *Text Plus*, playing around with text files couldn't be easier!

## ST



• More than just a database, *Personal Database Plus* is also a text editor and label printer

## PC



• *Duke Nukem* provides action of the kind never seen in a PC

In the Amiga sector of the *Express* Cover Disk, wearing a red, black and white label we have *Text Plus*, a friendly, easy-to-use text editor that enables the loading, writing and printing of text files!

And on the other side of the disk, for the ST, is a demo version of *Personal Database Plus*, a combined database, text editor and label maker. It's paired with *Calendar*, a handy desktop accessory.

Completing this tantalising trio is *Duke Nukem* for the PC, a game that stretches the PC further than any other shareware release has ever stretched it before!

**PLUS WE BRING YOU NEWS, REVIEWS AND PREVIEWS OF ALL THAT'S HAPPENING IN THE WORLD OF COMPUTING!**

\* As surveys have shown that 99 per cent of our readers are male, we hope we have not offended any female readers with this overtly sexist page heading. The editor apologises unreservedly. And while we're on the subject he may as well also say sorry for using the completely gratuitous picture on page 21...

**THE ACTION STARTS IN ONLY SEVEN DAYS TIME**

**BUT MAKE TRIPLE SURE YOU GET YOUR COPY!**  
Complete this form and hand it to your newsagent

TO THE NEWSAGENT:  
Please reserve me ..... copy/copies of *New Computer Express* every week, beginning with issue 153, out on 10th October.

NAME .....

ADDRESS .....

POSTCODE ..... PHONE NO ..... DAY ..... EVENING .....

To the newsagent: *New Computer Express* is published by Future Publishing and is available from your local wholesaler. Send back all your Future shop save coupons for entry in a free draw to: Annie Gronow, Future Publishing, 30 Monmouth Street, Bath BA1 2BW.

EDITOR • Andy Rogers  
NEWS EDITOR • Tim Smeaton  
PRODUCTION EDITOR • Jane Brown  
ART EDITOR • Angela Neal  
COVER DISK EDITOR • Tim Smeaton  
STAFF WRITER • Dave Golder  
PRODUCTION ASST • Alison Harper  
GAMES REVIEWER • Stuart Campbell

CONTRIBUTORS  
• Jason Holborn • James ...  
• Rod Lawton • Paul ...  
• Ian Wrigley • Haydn ...  
• Ed Roberts • Robin ...  
• Andrew Roberts • Neil ...  
• Alison ...

CIRCULATION DIRECTOR • ...  
AD MANAGER • Mike Jennings  
SENIOR SALES EXEC • Tim ...  
AD EXECUTIVES • Charlie ...  
• Stephen Kennedy-Hall  
AD PRODUCTION • Frances ...  
AD TYPESETTING • Terry ...  
PRODUCTION TECHNICIANS  
• Simon Windsor • Chris ...  
• Jerome Clough  
PUBLISHER • ...

ABC awarded circulation ...  
1991: 20,214 copies per week  
We regret we cannot enter into any personal correspondence. Technical enquiries should be addressed to Tech Tips at the address below.  
While every care is taken in the preparation of *New Computer Express*, Future Publishing cannot be held responsible for the consequences of any errors that may occur.  
• Subscriptions: The Old Barn, Somerton, Somerset (BA98) 7991  
• Printed by Redwood Press, Melksham, Wilt  
• Distributed in UK and Eire by Future Publishing (0225 442544), rest of world by Corning (0800 444005)  
Future Publishing Ltd 1991  
30 Monmouth Street, Bath BA1 2BW

CONTACTS  
Tel: 0225 442444 Fax: 0225 440322  
E-mail: ASPECT@BATH.792.0280  
Disk: ...  
0 84: TX116  
0 111282

**Your guarantee of value**  
This magazine comes from Future Publishing, a company founded just six years ago, but which now sells more computer magazines than any other publisher in Britain. We offer:  
**Better advice.** Our tips are packed with life, suggestions and explanatory features, written by the best in the business.  
**Stronger reviews.** We have a strict policy of editorial independence, and our reviews give other buyers recommendations.  
**Clearer design.** You need solid information fast. So our designers highlight key elements by using charts, diagrams, summary boxes, occasional photographs.  
**More reader response.** We draw strongly on readers' contributions, resulting in the finest letters pages and the best reader tips. Buying one of our magazines is like joining a nationwide user group.

Better value for money. More pages, better quality: magazines you can trust.

**Future PUBLISHING**  
... of Future's ...  
...  
New Computer Express  
Amiga Format • ST Format • PC Format  
Amiga Power • Amiga Shopper  
PC Plus • PC Answers • 8000 Plus  
...  
Sega Power  
... Format



# THE GALAXY

**RANGE OF COMPUTERS**  
*Classic simplicity*  
*Superior technology*

**286/386/486**

**SUPPLIED READY TO USE**

**24 HOUR DELIVERY**



## SPECIFICATION

All Goldstar Systems are supplied ready assembled.  
 They are thoroughly soak-tested and set up with any  
 software options purchased and feature the following as standard.

- Modern style case
- Quality Motherboard
- AMI BIOS
- 1MB Fast RAM (expandable)
- Hard Disk Controller
- Parallel Printer Port
- 2 Serial Ports (mouse etc)
- Game Port
- HD Floppy (3.5 or 5.25)
- HDD, Turbo & Power LED's
- Reset Button
- Turbo Switch
- LED Speed Readout\*
- Enhanced 102 Keyboard
- Video Card/Monitor
- 40MB Hard Disk Drive

\* Not available on slimline case

**ONE YEAR  
ON-SITE  
WARRANTY**

SYSTEM	MONO	M-VGA	C-VGA	VGA+	S-VGA (0.28 dot pitch)
80286 12MHz	£549	£609	£729	£754	£779
80286 16MHz	£569	£629	£749	£774	£799
80386SX 16MHz	£749	£809	£929	£954	£979
80386 25MHz	£899	£959	£1079	£1104	£1129
80386-25 +CACHE	£949	£1009	£1129	£1154	£1179
80386-33 +CACHE	£1049	£1109	£1229	£1254	£1254
80486-25 +CACHE	£1699	£1759	£1879	£1904	£1929

If any of these features are not required please phone for possible price reduction.

**WE WILL TRY AND BEAT ANY PRICE FOR THE SAME SPEC!**

HARDWARE OPTIONS		SOFTWARE OPTIONS	
Additional Floppy Drive	+£45	MS-DOS 4.01	£49
Hard Disk up to 80MB	+£129	MS-Windows Version 3.0	£79
Hard Disk up to 125MB	+£195		
Add. Memory per MB (286)	+£44		
Add. Memory per MB (386/486)	+£54		
Internal Tape Backup Unit	+£219		
Mini Tower Option	+£30		
Full Tower Option	+£99		
Microsoft Compatible Mouse	+£29		
Mouse with Software, Mat and 'House'	+£39		

**TRADE  
ENQUIRIES  
WELCOME**  
 ☆ ☆ ☆ ☆ ☆  
**DEALERS  
REQUIRED**



**GOLDSTAR COMPUTERS**

GB LIMITED



**ALL PRICES ARE EXCLUSIVE OF VAT AND CARRIAGE**

**0733 68899**

Delivery is usually within 48 working hours from receipt of cleared funds. Prices and specifications  
 subject to change without prior notice. Goods offered subject to availability and conditions of sale.  
 Our standard terms and conditions apply at all times. Errors and omissions excepted.

Unit 21, The Computer Works, Second Drove Ind. Est.  
 Fengate, Peterborough, Cambridgeshire PE1 5XA.



# The Ultimate War Machine

**MEGAFORTRESS** is  
ready when you are...

It's the enemy's worst nightmare; a nearly invincible heavy bomber, carrying enough firepower to destroy the most heavily defended installation in the world.

Megafortress is in a class by itself; a radically modified B52H Stratofortress, with radar-absorbing fibresteel skin and enough state-of-the-art sensory and weapons systems to jam and blast its way into any target on earth.

Flying Megafortress isn't easy, you're a Pilot, Navigator, Electronic Warfare Officer and Gunner all rolled into one!

Megafortress' multi-position bomber features complete electronic countermeasures technology, terrain guidance radar, multiple missions, and a massive arsenal at your disposal. Full colour VGA graphics and Sound Blaster/Adlib sound boards support brings the reality of long-range strategic air assaults into your home.

*Available for Commodore  
Amiga, Atari ST, IBM PC  
and compatibles.*

## MEGAFORTRESS

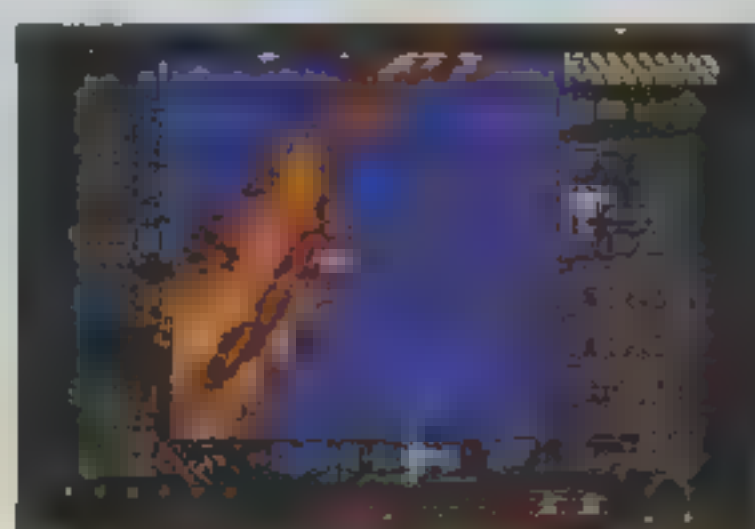
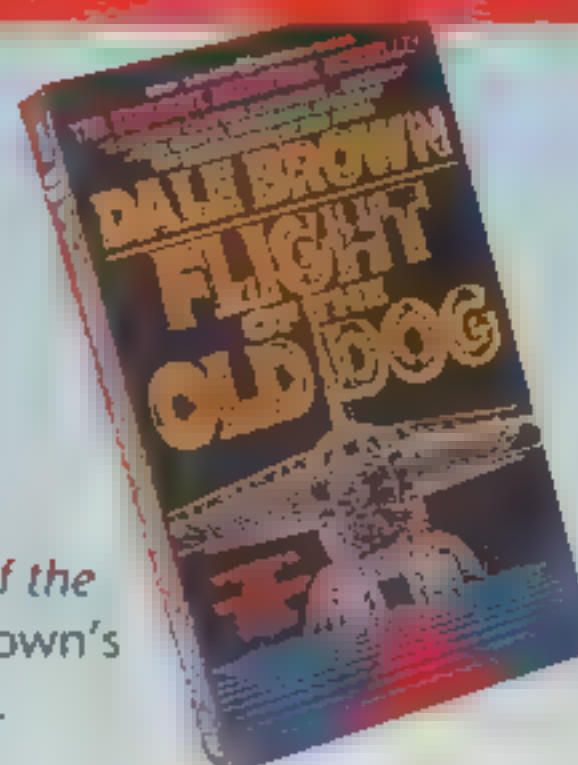


Electronic Countermeasures



Offensive Weapons Station

Based on 'Flight of the Old Dog', Dale Brown's best selling novel.



Navigator's Station-Global Display



Pilot's Station

Mindscape international Ltd  
The Coach House  
Hooklands Estate, Scaynes Hill  
West Sussex RH1 77NG

Tel: (0444) 831761  
Fax: (0444) 831688

For information on all Mindscape products please phone  
(0898) 234214. (Please note, calls charged at 34p per minute  
during cheap rate and at 45p per minute at other times.)



MINDSCAPE



## PHILIPS P3202 COMPATIBLE

OUR PRICE  
**£599**  
12 MONTHS WARRANTY

## PHILIPS P3302 386 SYSTEM

OUR PRICE  
**£899**  
12 MONTHS WARRANTY



- AT Compatible
- 1 x 3.5" 1.44MB floppy disk drive
- 1 x 45MB hard disk drive
- Powerful Intel 80386 processor - 16MHz
- Slot for 80387 co-processor
- Space for 2 further half height drives
- 8 Expansion slots
- 1 Serial, 1 parallel port
- MS DOS 3.3 and Manuals
- 1MB RAM
- VGA Mono monitor
- Keyboard

## STRAD COMBINED TELEPHONE FAX AND ANSWER MACHINE



STRICTLY LIMITED OFFER

10 sheet feeder and paper cutter. Messages are recorded on a micro cassette and played back. BT/Mercury compatible with automatic selection and Fax messages, on hook dialling. 100 number memory store and numbers. Free one year on-site warranty.

## HEWLETT-PACKARD SERIES 111

RRP £1749  
OUR PRICE  
**£1049**  
12 months on site warranty



## HEWLETT-PACKARD SERIES 111P

RRP £1179  
**£699**



MODEL	RRP	OUR PRICE
NEW Desk Jet 500	£499	£335
Think Jet	£449	£309
QuietJet and QuietJet Plus	£499	£349
PaintJet	£649	£449
PaintJet XL	£1745	£1169
Rugged Writer	£1549	£999

3 years warranty (not on-site)\*

## GENIUS F303 DYNA MOUSE

OUR PRICE  
**£39**

- High 350-1050 dpi resolution
- Supports either PS/2 mouse or serial port
- Auto-detection modes between 2 & 3 button mouse
- Super tracking speed: 500mm/sec and up
- Dr. Genius software
- Genius menu maker
- Mouse pocket & pad
- Software is on 5.25" disks

## TOSHIBA T3200/40Mb

HARD DISK  
RRP £2595  
STRICTLY LIMITED QUANTITY AT  
**£999**



- 1MB RAM - expandable to 4MB
- 4MB on motherboard
- 12/6MHz Intel 80286 Processor
- Slot for 80287 maths co-processor
- 1.44MB/720Kb diskette drive
- High resolution gas plasma display 216mm x 144mm
- 720 x 400 resolution with 4 grey scales
- 80 characters x 25 lines (text)
- Full size numeric keypad
- 10 function keys
- Centronics parallel/external diskette drive port
- EGA/AT & T6300/Hercules compatible
- One RS-232C serial port
- MS DOS 4.01
- EGA colour monitor
- port - external keyboard port
- Full size 16/8-bit ISA slot, half - size 8-bit ISA slot
- Sculptured full size 85 key keyboard
- Battery backed clock/calendar
- 110/220V switchable power supply

The TOSHIBA is a powerful, fast, full-function computer by the acknowledged leaders in the field of portable technology. With a high speed 12MHz 80286 microprocessor, and an internal 40Mb hard disk drive. The high resolution 720 x 400 dot variable contrast gas plasma display has up to 4 grey scales, plus EGA graphics as standard.

## SHARP QA25

COMPUTER PROJECTION PANEL  
RRP £699

**£299**



- Sharp QA25 gives the computer user the ability to project computer images via an overhead projector. The high quality LCD screen is capable of projecting a large, high resolution picture with extremely clear display.
- Super twisted, high contrast LCD
- Dark blue on grey 208 x 130mm. Screen gives clarity and wide angle view.
- Excellent Compatibility - interfaces with any IBM PC/XT/AT or compatible
- Completely portable 12" x 14" x 2" weight 6lbs
- Unique cooling fan - allows constant use whilst maintaining display quality
- Easy hook-up - via a single cable to CGA port and a second to AC adaptor
- 12 months warranty

## Krest computer products

POST YOUR ORDER TO KREST COMPUTER PRODUCTS, UNITS 10 & 11, THE LAWRENCE HILL BUSINESS PARK, WINCANTON, SOMERSET BA9 9RT  
PLEASE REMEMBER THESE PRICES ARE EXCLUSIVE OF VAT & CARRIAGE

# UNBEATABLE DEALS IN STOCK NOW



## PHILIPS XT AND PRINTER DEAL

OUR PRICE  
**£399**

12 MONTHS WARRANTY

- Manufactured by one of Europe's PC Market Leaders
- Fully IBM XT Compatible
- Fast 8088 - 2 processor running at 10MHz
- 8087 maths co-processor slot
- 768K RAM
- 5.25" 360K FDD
- 1 x 3.5" 1.44 MB FDD
- 2 Serial and 1 parallel port
- MS DOS 4.01
- Monitor Adaptor Card
- Keyboard
- Mannesman Tally MT81 Dot Matrix Friction/Tractor 130 CPS Draft NLQ 26 CPS

FREE VGA MONO MONITOR  
FREE MANNESMAN MT81 PRINTER RRP £159  
FREE ABILITY PLUS SOFTWARE RRP £199

VGA COLOUR MONITOR ADD £150  
30MB HARD DRIVE ADD £150

TELEPHONE YOUR ORDER NOW  
ON 0963 34800  
FAX 0963 34240

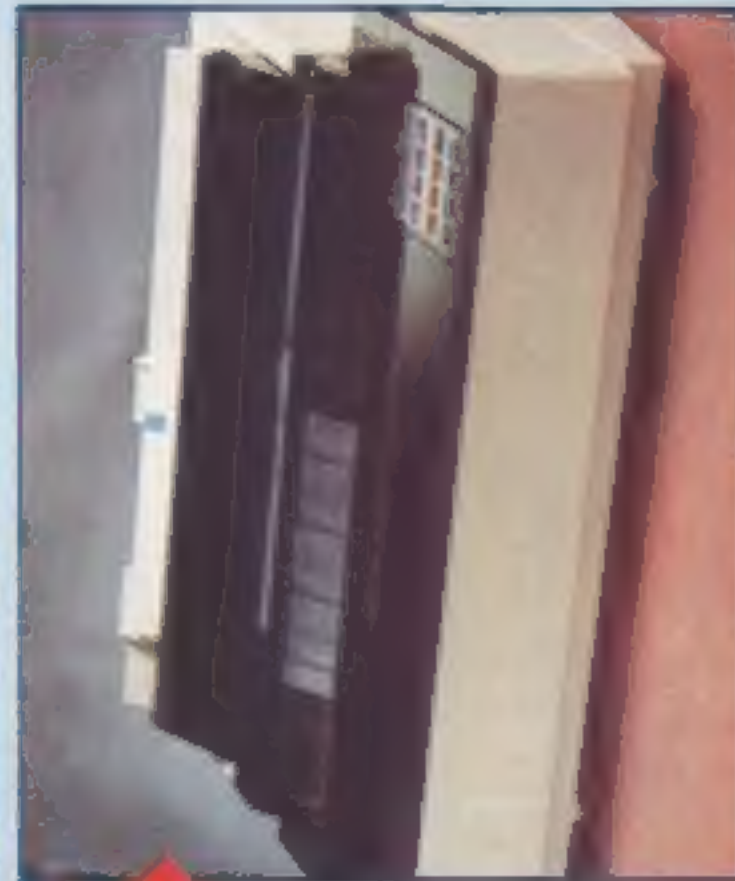
IMMEDIATE CREDIT CARD DESPATCH



## EPSON PRINTER RANGE

MODEL	NO OF PMS	RRP	OUR PRICE	MODEL	NO OF PMS	RRP	OUR PRICE
L1400	9	£199	£119	L1850	9	£229	£169
L1400	24	£299	£176	L1850	24	£319	£229
F1850	9	£429	£299	F11050	9	£539	£369
L1850+	24	£599	£419	L11050+	24	£729	£509
L1860	24	£719	£505	L11060	24	£959	£669
L12550	24	£1099	£775	T1104800 SPECIAL	48	£1999	£599
S1850	360 x 360 dpi INK JET	£769	£495	S12550	INK JET	£999	£699

## EPSON TLQ4800 DOT MATRIX PRINTER



RRP £1999

OUR PRICE £599

This high specification dot matrix printer from the world's number 1 printer manufacturer is being offered for a limited period at 70% discount. This offer includes full 12 months warranty and each machine is full UK specification and includes power cables and manuals.

## STAR LC 10

RRP £199

OUR PRICE £99

- Low cost 9-pin, 80 column dot matrix printer
- Fully industry standard compatible
- 144 cps draft elite/36 cps Near Letter Quality
- 4 K-byte buffer as standard
- Paper Parking
- Panel lock mode (for software override)
- Push feed tractor

- 8 resident Near Letter Quality fonts Courier, Sans serif, Orator 1 & 2 and italic versions. (6 selectable from the front control panel)



ORDER



## EPSON LT286 EQUITY £699

12 months on-site warranty

- Fully IBM XT/AT Compatible
- 80286 microprocessor running at 12MHz switchable to 8MHz
- 640K RAM (expandable to 4.6MB in 2MB increments)
- 1 x 20 MB Hard Disk Drive
- 1 x 3.5" 1.44MB Floppy Disk Drive
- Internal rechargeable NiCad batteries
- A/C Adaptor
- Backlit NTN Screen
- Serial and parallel ports as standard
- Socket for 80287 maths co-processor
- 8.05kg weight
- Complete with: MSDOS 3.3, GW Basic, 89 key sculptured keyboard, full manuals
- 12 months on-site warranty

## TERMS AND CONDITIONS

All prices are exclusive of VAT and carriage. All goods remain the property of Crest Computer Products until paid for in full. Cost of carriage is shown for each item. All orders must be accompanied by payment in pounds sterling, either by bankers draught, company cheque, personal cheque, Visa, Access or postal order. Your goods will be despatched immediately we receive payment. Cheques may be cleared. Orders from Education, Government Departments or quoted prices are accepted with official order number. If goods are damaged in transit this must be recorded in writing at time of receipt. We cannot accept responsibility for goods signed for as received in 'good condition'. If goods are found not working, this must be reported in writing within 7 days. Returns will only be accepted with a returns number. Please request this by telephone stating your invoice number.

BASCHOW LIMITED TRADING AS KREST COMPUTER PRODUCTS REGISTERS NO. 1842818 COTD SA 228

**NYLON CARRYCASE**  
Protect your portable in a strong black nylon carry case. £25.

**EXPANSION CHASSIS**  
Attaches to the base of your portable to provide two extra full slots, one with 16 bit AT compatible connector and the other with an 8 bit XT connector. Allows options such as VGA, 3270 emulation and Network Cards. £45.

**EXTRA AC ADAPTER**  
Essential for the computer user on the move - one adaptor for home and one for the office. £15.

**2MB MEMORY UPGRADES**  
Expand your memory in 2mb increments to a maximum of 4.6mb allowing you to run more complex software programmes that require more RAM capacity. £199.

## PHILIPS P3202 AT COMPATIBLE

OUR PRICE £599

INC 12 MONTHS WARRANTY

## PHILIPS P3302 386 SYSTEM

OUR PRICE £899

INC 12 MONTHS WARRANTY



- Fully IBM AT Compatible
- 1 x 1.2MB 5.25" floppy disk drive
- 1 x 70MB hard disk drive
- Fast 80286 processor - 8MHz
- 80287 Co-processor slot
- 8 Expansion slots
- 1 Serial, 1 parallel port
- 640K RAM
- VGA Mono monitor
- MS DOS and Manuals
- 1 x 3.5" 1.44MB floppy disk drive
- 1 x 45MB hard disk drive
- Powerful Intel 80386 processor - 16MHz
- Slot for 80387 co-processor
- Space for 2 further half height drives
- 8 Expansion slots
- 1 Serial, 1 parallel port
- MS DOS 3.3 and Manuals
- 1MB RAM
- VGA Mono monitor
- Keyboard

## AMSTRAD COMBINED TELEPHONE FAX AND ANSWER MACHINE

9600AT

RRP £699.00

OUR PRICE £399



STRICTLY LIMITED OFFER

This amazing product is ideal for office or home use. The compact unit is unobtrusive and works on a single telephone line and will answer incoming faxes and telephone messages automatically. 10 sheet feeder and auto metal paper cutter. Messages are recorded on a micro cassette and are easy to playback. BT/Mercury compatible with automatic selection of voice and Fax messages, on hook dialling, 100 number memory store of phone/fax numbers. Free one year on-site warranty.



## TOSHIBA P341SL

PRICE  
**49**

it matrix

ads 216cps

ps IQ

tractor

die up to

olus 3

it fonts

face

idith for

riage

INCLUDES  
FREE  
SHEET FEEDER



## AMSTRAD PPC640D PORTABLE

£249

PRICE

**79**



- AC mains adaptor
- Hayes compatible internal modem
- Socket for 8087 co-processor
- 5.4KG (excluding batteries)
- Compartment for 10 alkaline batteries
- Enhanced 102 key keyboard—ideal for training

**LINK MASTER PC LINK SOFTWARE**  
**MIGENT ABILITY PLUS** RRP £199  
**PPC ORGANISER SOFTWARE**  
**12 MONTHS ON-SITE WARRANTY**  
**MIRROR II COMMUNICATION SOFTWARE**

**ADD A QUALITY MONITOR FOR USE IN THE OFFICE**  
—ONLY £50 WHEN ORDERING YOUR AMSTRAD PPC  
**ONLY WHILE STOCKS LAST**

## AMSTRAD PC2386

COMPLETE  
SYSTEMS FROM

ONLY

**£899**

**PLUS FREE**  
**TIMWORKS V1.2**  
**PLUS MICROSOFT**  
**WINDOWS & MOUSE**

- 20 MHz Intel 80386DX Processor
- 4Mb parity checked RAM
- Choice of VGA compatible monitors
- 64K RAM cache memory
- 3½" 1.4Mb floppy disk drive
- 65Mb Hard disk with 1:1 interface
- 80387 maths co-processor socket
- 4 x 16-bit 1 x 8-bit expansion slots
- 12 months on site warranty

12" MONO MONITOR RRP £1999 OUR PRICE	<b>£899</b>
14" COLOUR MONITOR RRP £2099 OUR PRICE	<b>£999</b>
12" HIGH RESOLUTION COLOUR MONITOR RRP £2149	<b>£1049</b>
14" HIGH RESOLUTION COLOUR MONITOR RRP £2199	<b>£1099</b>

## ADD A LASER

FOR ONLY

**£499**

When purchased with  
an Amstrad PC2386  
COMPACT DESK TOP  
LASER PRINTER  
**LZR 650**  
**DATAPRODUCTS**

Versatile, compact,  
economical. Adapts  
to any office  
environment.

INCLUDES 12 MONTHS  
ON-SITE WARRANTY

- 6 Pages per minute output
- 300 x 300 Dpi resolution
- Dual interfaces
- 512K expandable to 4MB
- Super compact dimensions: Width 13.4", Depth 14.2", Height 10.9"

**LZR 650** Single Bin **£599** Dual Bin **£699**

**LZR 950** RRP £1095

As the LZR650 but fast 9 page  
per minute includes 12

months on-site warranty **£799**

**LZR 960** RRP £1995

PostScript level 2 interpreter  
9 page per minute. **£1499**



- Wide range of emulations, HP LaserJet series II, Diablo 630, Epson FX-80, IBM
- Proprietary (4201), IBM Graphics Printer (5152)
- Compatible with virtually all popular software applications
- Supports a wide range of font cartridges and downloadable fonts
- Sophisticated paper handling can handle transparencies, labels or envelopes
- 100% error recovery
- All consumables included
- Weight 15kg

## SOFTWARE

### INTEGRATED PACKAGES

Geoworks Ensemble	RRP £149	<b>Our Price £149</b>
Informix Smartware II	RRP £695	<b>Our Price £435</b>
Lotus Symphony V2.2	RRP £595	<b>Our Price £415</b>
Migent Ability Plus	RRP £199	<b>Our Price £115</b>
Microsoft Works V2	RRP £145	<b>Our Price £105</b>

### GRAPHICS

Corel Draw V.2	RRP £449	<b>Our Price £270</b>
Harvard Graphics V2.3	RRP £395	<b>Our Price £255</b>
Z Soft Publishers Paintbrush	RRP £244	<b>Our Price £155</b>
Lotus Freelance V3.01	RRP £395	<b>Our Price £265</b>
Drawperfect	RRP £425	<b>Our Price £265</b>

### SPREADSHEETS

Borland Quattro Pro V3.0	RRP £595	<b>Our Price £275</b>
Lotus 123 V2.3	RRP £395	<b>Our Price £270</b>
Lotus 123 V3.a	RRP £475	<b>Our Price £329</b>
Microsoft Excel V3.00	RRP £395	<b>Our Price £275</b>
Supercalc 5	RRP £79	<b>Our Price £79</b>

### WORD PROCESSING

Wordstar V6	RRP £399	<b>Our Price £249</b>
Wordperfect V5.1	RRP £425	<b>Our Price £260</b>
Microsoft Word V5.5	RRP £395	<b>Our Price £260</b>
Multimate Advantage II	RRP £450	<b>Our Price £325</b>
Microsoft Word (Window)	RRP £445	<b>Our Price £299</b>
Borland Sprint	RRP £200	<b>Our Price £135</b>

### ACCOUNTS

Sage Sterling Financial Controller	RRP £599	<b>Our Price £399</b>
Sage Sterling Accountant Plus V4.2	RRP £699	<b>Our Price £299</b>
Sage Sterling Payroll II	RRP £199	<b>Our Price £140</b>
Sage Sterling Job Costing	RRP £199	<b>Our Price £140</b>
Sage Sterling Bookkeeper V4.00	RRP £99	<b>Our Price £75</b>

### COMMUNICATIONS

Laplink PC V3.00 (including cables)	RRP £110	<b>Our Price £65</b>
Carbon Copy Plus V5.1	RRP £159	<b>Our Price £99</b>
PC Anywhere IV	RRP £150	<b>Our Price £105</b>
Sage Chitchat	RRP £99	<b>Our Price £70</b>

### DATABASES

Ashton Tate DBase III+ V1.1	RRP £595	<b>Our Price £365</b>
Ashton Tate DBase IV V1.1	RRP £595	<b>Our Price £395</b>
Sapphire Database V4.2	RRP £595	<b>Our Price £430</b>
Forpro	RRP £645	<b>Our Price £375</b>
Sage Retrieve III	RRP £149	<b>Our Price £95</b>

### DESKTOP PUBLISHING

Aldus Pagemaker V4	RRP £695	<b>Our Price £430</b>
Ventura Publisher (Windows)	RRP £795	<b>Our Price £519</b>
Ventura Publisher (GEM)	RRP £795	<b>Our Price £519</b>
Timeworks V2	RRP £139	<b>Our Price £99</b>
Microsoft Power Point (Windows)	RRP £395	<b>Our Price £280</b>



IMMEDIATE CREDIT CARD DESPATCH

TELEPHONE 0963 34800 FAX 0963 34240



## EPSON PRINTER RANGE

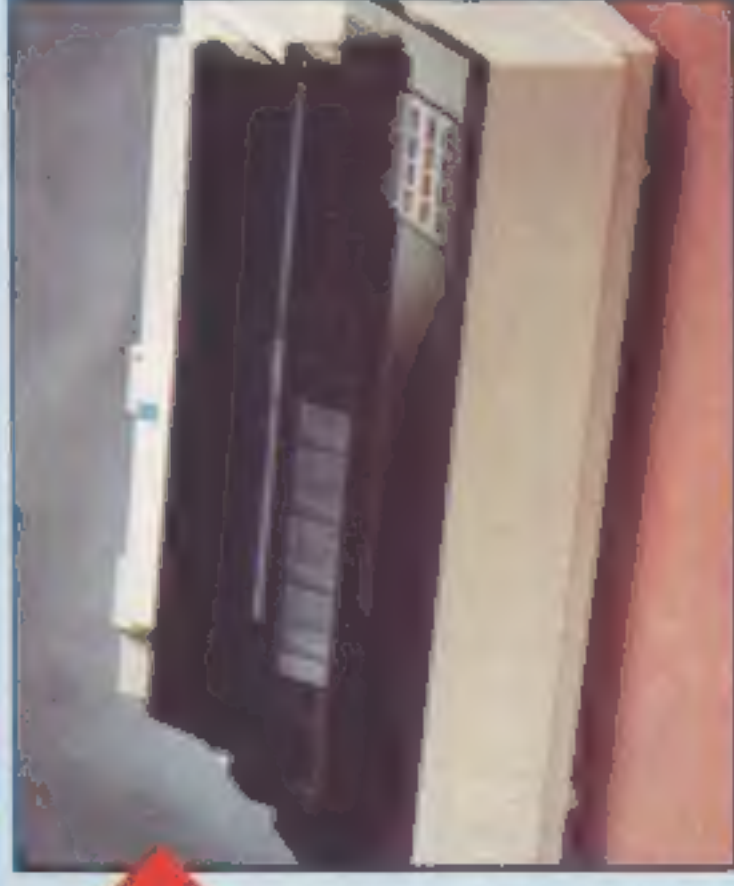
MODEL	NO OF PMS	RRP	OUR PRICE	MODEL	NO OF PMS	RRP	OUR PRICE
LX400	9	£199	£119	LX850	9	£229	£169
LQ400	24	£299	£176	LQ550	24	£319	£229
FX850	9	£429	£299	FX1050	9	£539	£369
LQ850+	24	£599	£419	LQ1050+	24	£729	£509
LQ860	24	£719	£505	LQ1060	24	£959	£669
LQ2550	24	£1099	£775	TLQ4800 SPECIAL	48	£1999	£599
S0850 360 dpi INK JET		£769	£495	S02550		£999	£699

## EPSON TLQ4800 DOT MATRIX PRINTER

RRP £1999

OUR PRICE **£599**

This high specification dot matrix printer from the world's number 1 printer manufacturer is being offered for a limited period at 70% discount. This offer includes full 12 months warranty and each machine is full UK specification and includes power cables and manuals.



## STAR LC 10

RRP £199

OUR PRICE **£99**

- Low cost 9-pin, 80 column dot matrix printer
- Fully industry standard compatible
- 144 cps draft elite/36 cps Near Letter Quality
- 4 K-byte buffer as standard
- Paper Parking
- Panel lock mode (for software override)
- Push feed tractor



- 8 resident Near Letter Quality fonts: Courier, Sans-serif, Orator 1 & 2 and italic versions. (6 selectable from the front control panel)

## TOSHIBA P341SL

OUR PRICE **£249**

- 24 pin dot matrix printer
- Print speeds 216cps draft, 72cps LQ
- Friction & tractor feeds
- Will handle up to original plus 3 copies
- 3 resident fonts
- Dual interface
- 132 col width for wide carriage printing



INCLUDES FREE SHEET FEEDER

## AMSTRAD PPC640D PORTABLE

RRP £649

OUR PRICE **£279**

- Fully IBM PC-XT compatible
- 8086 16-bit processor 8MHz clock
- 640K RAM
- Integrated display adaptor
- Superwait LCD panel supports CGA/MDA text and graphics
- Complete with full manuals, carry case, DC car lead, PPC organiser and Link Master software plus Mirror II Communications software
- Twin 720K 3.5" disk drives
- Parallel and serial ports
- MS DOS 3.3



- AC mains adaptor
- Hayes compatible internal modem
- Socket for 8087 co-processor
- 5.4KG (excluding batteries)
- Compartment for 10 alkaline batteries
- Enhanced 102 key keyboard - ideal for training

**FREE** • LINK MASTER PC LINK SOFTWARE

**FREE** • MIGENT ABILITY PLUS RRP £199

**FREE** • PPC ORGANISER SOFTWARE

**FREE** • 12 MONTHS ON-SITE WARRANTY

**FREE** • MIRROR II COMMUNICATION SOFTWARE

**PLUS**

ADD A QUALITY MONITOR FOR USE IN THE OFFICE - ONLY £50 WHEN ORDERING YOUR AMSTRAD PPC - ONLY WHILE STOCKS LAST

## AMSTRAD PC2386

COMPLETE SYSTEMS FROM

ONLY **£899**

**PLUS FREE**  
TIMEWORKS V1.2  
PLUS MICROSOFT  
WINDOWS & MOUSE

- 20 MHz Intel 80386DX Processor
- 4Mb parity checked RAM
- Choice of VGA compatible monitors
- 64K RAM cache memory
- 3 1/2" 1.4Mb floppy disk drive
- 65Mb Hard disk with 1:1 interface
- 80387 maths co-processor socket
- 4 x 16-bit 1 x 8-bit expansion slots
- 12 months on-site warranty



12" MONO MONITOR RRP £1999 OUR PRICE	<b>£899</b>
14" COLOUR MONITOR RRP £2099 OUR PRICE	<b>£999</b>
12" HIGH RESOLUTION COLOUR MONITOR RRP £2149	<b>£1049</b>
14" HIGH RESOLUTION COLOUR MONITOR RRP £2199	<b>£1099</b>

## ADD A LASER

FOR ONLY **£499**

When purchased with an Amstrad PC2386 COMPACT DESK TOP LASER PRINTER

**LZR 650**  
DATAPRODUCTS

Versatile, compact, economical. Adapts to any office environment.

INCLUDES 12 MONTHS ON-SITE WARRANTY

- 6 Page per minute output
- 300 x 300 Dpi resolution
- Dual interfaces
- 512K expandable to 4MB
- Super compact dimensions: Width 13.4", Depth 14.2", Height 10.9"
- Supports a wide range of font cartridges and downloadable fonts
- Sophisticated paper handling can handle transparencies, labels or envelopes
- 100% error recovery
- All consumables included
- Weight 15kg



**LZR 650** Single Bin **£599** Dual Bin **£699**

**LZR 950** RRP £1095

As the LZR650 but fast 9 page per minute includes 12 months on-site warranty **£799**

**LZR 960** RRP £1995

PostScript level 2 interpreter 9 page per minute. **£1499**

ORDER NOW! TELEPHONE 0963 34800 FAX 0963 34240